

Sequence Listing

- <110> Ashkenazi, Avi J.
 Baker, Kevin P.
 Botstein, David
 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
 Fong, Sherman
 Gerber, Hanspeter
 Gerritsen, Mary E.
 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin
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 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu
 110 115 120
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln
 125 130 135
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe
 140 145 150
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile
 155 160 165
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly
 170 175 180
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly
 185 190 195
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu
 200 205 210
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Ala
 215 220 225
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Gly Arg His
 230 235 240
 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln
 245 250

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 7
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 attaaactggt tggtagcttc tatcctgggg gctgagcgac tgcgggccag 100
 ctcttccct actccctctc ggctccttgt ggcccaaagg cctaaccggg 150
 gtccggcggt ctggcctagg gatcttcccc gttgccctt tggggcggga 200
 ttggtcgcga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
 gggttcctcg gaggccaga ctggtccatc occatcttgg actttgtgga 300
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
 gccagagcc ggtgattttg ttggcctgtg ttcccttgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaaga 450
 actagtgtgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
 aagatcaatt tcaagaagca tgcacttctc ctcttgcaaa gaccataca 550
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
 taaagcaatg atggtccaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

tctgatgtgg tcagtgacct tgaacacgaa gagatgaaaa tcttgaggga 750
 agttctttaga aaatcaaaag aggaatatga ccaggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagcccac agtgcattcc 850
 agtgaagctg caataatgaa taattcccaa ggggatgggt aacattttgc 900
 acacccaccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950
 ctttggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000
 ggctgaaga ttcttggtt agagcatgag agcattgaag gaccaatagc 1050
 aaacttatca gtacttgga cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaacccactg gggaggtaga 1200
 ggaaatgaca gagaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Ala Ala Glu Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser
 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	155	160			
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	170	175			180
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	185	190			195
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	200	205			210
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	215	220			225
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	230	235			240
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	245	250			255
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	260	265			270
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	275	280			285
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	290	295			300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	305	310			315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	320	325			330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	335	340			345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	350	355			360
Lys	Glu	Glu	Val	Ile	Asn	Lys									365				

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
 gggcacagca catgtgaagt ttttgatgat gaagaagaaa gcaaatgtac 50
 ctatacagag attcatcagg aatacaaaga actagttgaa aagctgttag 100
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcactttct ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
gaggaatatg accaggaa 418

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 10
ttgacctata cagagattca tc 22

<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 11
ctaagaactt ccctcaggat ttt 23

<210> 12
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 12
atgaagatca atttcaagaa gcatgcactt ctctctctgc 40

<210> 13
<211> 2886
<212> DNA
<213> Homo sapiens

<400> 13
gcgtgggtttt tgttctgcaa taggcggcctt agagggaggg gctttttcgc 50
ctatacctac tgtagcttct ccacgtatgg accctaaaagg ctactgctgc 100
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
acagtgtgtg agtcatcotg taatatgctc cttgtcaaca atgtatacat 250
tcctgctagg tgccatatc attgctttaa gctcaagtcg catcttacta 300
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tctctgaagg aattctctga ttctcatgaag tgggtccattc ctgcctttct 500
 ttatttccctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 700
 ctttacagca caacttgcca ggacgtggat ttcacacga tgcctttttc 750
 agccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt tttcagtcac atccgtcttg gcattggcca tgttcttatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag ggaaccagc tccactgaaag catcttcata cagaacagca 1000
 aactctattt ctttgccatt ctgtttaatg ggctgactct gggccttcag 1050
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtagccctta tttttgtaac tgcattccag ggccttccag 1150
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 caggttacca ctgtcattat cacaacagtg tctgtccctg tctttgactt 1250
 caggccctcc ctggaatttt tcttggaagc cccatcagtc cttctctcta 1300
 tattttatta taatgccagc aagcctcaag ttccggaata cgcacctagg 1350
 caagaaagga tccgagatct aagtggcaat cttgggagc gttccagtgg 1400
 ggatggagaa gaactagaaa gacttaccac acccaagagt gatgagtccag 1450
 atgaagatac tttctaactg gtaccacat agtttgagc tctcttgaac 1500
 cttattttca cattttcagt gtttgaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaaat cctaatactt tttgcatata tctagctact 1600
 ccctaaatgg ttccatccaa ggcttagagt acccaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgatac atcagaaagt tatatgtgca gattattttc cttggccttc 1750
 aagcttccaa aaaacttgta ataactcatg tagctatagc ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850
 atgccaagat cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttggttg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat tttatTTTT agaaattcat gggaaattgg 2100
 atttttgtaa taatctTTTT atgtttttaa cattggttcc ctatgcacca 2150
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcttt 2200
 tttctctca gtttggagg aaaaatcttg atgtcattac tctgaatta 2250
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatatt tttccaagag ttgaaatgct ggcttcagaa 2350
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400
 ctttcaaaag gatcacttag caaacacatg ttgactttta actgatgtat 2450
 gaattattaat actctaaaaa tagaaagacc agtaatatat aagtcacttt 2500
 acagtgtcac ttcacactta aaagtgcag gtatttttca tggatttttg 2550
 catgcagcca gtttaactct gtagatagag aagtcagggt atagatgata 2600
 ttaaaaatta gcaaacaaaa gtgacttgct cagggtcatg cagctgggtg 2650
 atgataaga agtgggcttt aactggcagg cctgtatgt tacagactac 2700
 catactgtaa atatgagctt tatgggtgca ttctcagaaa cttatacatt 2750
 tctgctctcc tttctcctaa gtttcatgca gatgaatata aggtaatata 2800
 ctattatata attcatttgt gatattcaca ataatatgac tggcaagaat 2850
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Glu Lys Gln Cys Cys Ser His Pro Val Ile Cys Ser Leu Ser
 1 5 10 15
 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser
 20 25 30
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn
 35 40 45
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu
 50 55 60
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys
 65 70 75
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu
 80 85 90
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe
 95 100 105
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro
 110 115 120

Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
125	130		135
Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg	Leu Asn Trp Ile	Gln
140	145		150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser	Ile Val Ala Leu	Thr
155	160		165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu	Ala Gly Arg Gly	Phe
170	175		180
His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu	Phe
185	190		195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu	Trp
200	205		210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe	Ser
215	220		225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln	Cys
230	235		240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu	Lys
245	250		255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser	Lys
260	265		270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly	Leu
275	280		285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn	Cys Gly Phe Phe	Tyr
290	295		300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile	Phe Val Thr Ala	Phe
305	310		315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn	Met
320	325		330
Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr	Thr
335	340		345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe	Phe
350	355		360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile	Phe Ile Tyr Asn	Ala
365	370		375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg	Ile
380	385		390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg	Ser Ser Gly Asp	Gly
395	400		405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys	Ser Asp Glu Ser	Asp
410	415		420
Glu Asp Thr Phe			

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
cgtgcctgcg caatgggtgt cgggtccgct ttttccaat cgggacgtaa 50
tcgtgggttt tgttctgcaa taggcggctt agaggagggt gctttttcgc 100
ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgtctgc 150
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250
acagtgtctg agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
tcctgctagg tgcataatc attgctttaa gctcaagtcg catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaagtgt tgctcagaac tggatgaagct agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
tcctggaagg aattctctga ttcatgaag tggccattc ctgcctttct 550
ttatttctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 600
cagccatggc tggtatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
cctcctgaat ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttcagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcatcctg taatatgctc ctgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cgagcgctg ggcggacgcg tgggcgagcg cgtggggccg gcttggttag 50
cgcgcgcgcg cgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgtc taccaggctc caagcgcgct 150
ggcccgcgcg tcatggccaa aggagaaggc gccgagagcg gctccgcgcg 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaacaac agttgtctgt ttgcaacaag 300
ctttgctatg caattggggg agccccctac cagggtcacg gctgtgcct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400
tctctgcctc catcatcctg tttgtgggco gagcctggga tgcatcaca 450
gacccctcgg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg cctgggatca tcttctccac gcccttgccc gtcattgcct 550
acttctcat ctggttcgtg ccggaacttc cacacggcca gacctattg 600
tacctgcttt tctattgcct ctttgaaca atgggtcacg gttccatgt 650
tcctactcgt gctctcaca tggtcatcag caaccgagca gactgagcgg 700
gattctgcca cgcctatcg gatgactgtg gaagtgtcgg gcacagtgt 750
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tccaggactt caatagctct acagtagctt cacaagtgc caaccataca 850
catggcacca cttcacacag ggaacgcaa aaggcatacc tgctggcagc 900
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgatcctgg 950
gcgtgcggga gcagagagaa cctatgaag cccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggctcatg agccacggcc catcacatca 1050
acttattact ggcttctctt tcactctcct ggctttcatg ctggtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tcctggccat catgctctcg gccactttaa ccattcccat 1200
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ggatctcatc agcagtgcca tttctcatct tggtagccct catggagagt 1300
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcaagtgtggc 1350
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 tocatctgaa gcagcccccac ttccatggaa ccgagcccat cttcttctcc 1450
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 taccctcagt ctggaacttg cagggtagca gaccctggc tgctcgcagc 1550
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 ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750
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 gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcaggtgct 1850
 aggaagggaa ctgaagactc aaggaggtgg ccaggacac ttgctgtgct 1900
 cactgtgggg ccgctgctc tgtggcctcc tgccctccct ctgctgctc 1950
 gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
 ggccatagccc ggaacactaa tgtagaaacc tttttttac agagcctaata 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
 gtgagctatt aatgttatta atttcataa aagctggaaa gc 2142

<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
 1 5 10 15
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val	Leu
	110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly	Gln
	125	130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val	Ala
	140	145	150
Ser Gln Ser Ala	Asn His Thr His Gly	Thr Ser His Arg	Glu
	155	160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys	Ile
	170	175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu	Gln
	185	190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr	Phe
	200	205	210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys	Leu
	215	220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val	Glu
	230	235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg	Asn
	245	250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr	Leu
	260	265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys	Lys
	275	280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu	Ile
	290	295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala	Val
	305	310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu	Pro
	320	325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys	Gln
	335	340	345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr	Val
	350	355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser	Thr
	365	370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser	Gln
	380	385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met	Ala
	395	400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met	Tyr
	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
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 accctatgaa gccccagcagt ctgagccaat cgccactctc cggggcctac 150
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200
 ttcacccctc ttgctttcat gctggtggag gggaaactttg tcttgttttg 250
 caccctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc atcagtggtg cagctgcctt cttactaccc 500
 tgggtccatgc tgccctgatgt cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
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 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 cttccctcag cccttgaat ttggacatct gctgctttca tattttcata 200
 cattaactgca gtaaacctcc accatataga ccgggcttta ccttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttattttg ggcaatgcta 300
 aatattggcg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaag 400
 ctggccctgt acttgggaata ctgagttggt taggactttc tattgtggca 450

aacttcaga aaacaacct ttttgctgca catgtaagt gagctgtgct 500
tacctttggt atgggctcat tatatatgtt tggtcagacc atcctttctc 550
accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
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atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
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Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

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gagcggagat cctcaaacgg cctagtgcct cgcgcttccg gagaaaatca 150
gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200
aaccctttcc cacaaaagct aattgagtac acgttcctgt tgagtacacg 250
ttcctgttga ttacaaaag gtgcaggtat gagcaggctc gaagactaac 300
attttgttaa gttgtaaaac agaaaacctg ttgaaatgt ggtggtttca 350
gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccg 450
gctttacott atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
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<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
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cctctgtggtc ttgcgcgggt gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccc cgggcccggaga ctgggtccca ccgaggaggc tggaggcagg 200
tcgctgtggt tccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgccta cctctacaaa cagggtcttg ccatcccgcg ctccagcttc 350
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcgg tgggtgccac atgctgtac ctgctctcca 450
gtatttttgg caaacagttg ttggtgtcct acttctctga taaagtggcc 500
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt ttttttctt 550
attgtttttg agacttttcc coactgacac aaactgttcc ttgaacctct 600
cggcccacat tctgaacatt cccatcgtgc agttctcttt ctacgttctt 650
atcggtttga tccatataa ttctatctgt gtgcagacag ggtccatctc 700
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agctgtttgc cattgccatg gtggcattaa ttcctgggac cctcattaaa 800
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaatac 850
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagcccct 950
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 agcctggcca agatggtgaa atcctgtctc taataaaat acaaaaatta 1250
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 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
			215						220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
			230						235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
			245						250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
			260											

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
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 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
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 tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggcgtgatg ccttgcccat tgccaagaag 500
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 aaggtgatgc tcttgaaga cgccccaagg aaatttgaga ggctccatcc 700
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 cctatttacc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgcgg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggtg atgtcgacac caccactgg aaggtctacg ttatagccag 1150

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 agctcagaat aggaaaataa cttgggaatt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
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 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aacttggga 400
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 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
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 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
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cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
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<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
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 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val
				275					280					285
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln
				290					295					300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr
				305					310					315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser
				320					325					330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln
				335					340					345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln
				350					355					360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr
				365					370					375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu
				380					385					390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile
				395					400					405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr
				410					415					420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr
				425					430					435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile
				440					445					450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly
				455					460					465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala
				470					475					480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile
				485					490					495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly
				500					505					510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp
				515					520					525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln
				530					535					540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu
				545					550					555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro
				560					565					570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu
				575					580					585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys
				590					595					600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln
				605					610					615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala
				620					625					630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe
				635					640					645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val
				650					655					660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp
				665					670					675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met
				680					685					690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro
				695					700					705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly
				710					715					720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val
				725					730					735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His
				740					745					750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr
				755					760					765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu
				770					775					780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val
				785					790					795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile
				800					805					810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr
				815					820					825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu
				830					835					840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala
				845					850					855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu
				860					865					870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val
				875					880					885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr
				890					895					900

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
				980					985					990
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
				995					1000					

<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 34
 tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

 <210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 35
 cggacgcgtg ggcggaacgc tgggggctgt gagaaagtc caataaatac 50
 atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggttga 100
 tgtgcgtctt ccagggtac tcatccaaag gctaatcca acgttctgtc 150
 ttcaatctgc aaatctatgg ggtctctggg ctcttctgga cccttaactg 200
 ggtactggcc ctgggccaat cgtctctcgc tggagccttt gctcctctct 250
 actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
 gccttcaccc gcacactccg ttaccacact gggtcattgg catttggagc 350
 cctcatcctg acccttgtgc agatagcccc ggtcatcttg gagtatattg 400
 accacaagct cagaggagtg cagaaccctg tagccccgtg catcatgtgc 450
 tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
 ccgcaatgca tacatcatga togccatcta cgggaagaat ttctgtgtct 550
 cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
 gtctcggaca aagtcacaga cctgctgtctg ttctttggga agctgtgtgt 650

ggctcgaggc gtgggggtcc tgccttctt tttttctcc ggctcgatcc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcga gcggtcttct 800
 cagcgttttc ggcattgtgt tggacacgct ctctctctgc ttcttggaag 850
 acctggagcg gaacaaacgc tccctggacc ggcctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcacccacc 1000
 cccaccgtcc agccatccaa cctcacttog ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggctgaggc gggcggtatca cctgagtcag gagttcgaga 1150
 ccagcctggc caacatgggt aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtggtggcat gcacctgtca tccagctac tcgggaggct 1250
 gaggcaggag aatcgcttga acccgaggag cagagggtgc agtgagccga 1300
 gatcgcgcca ctgcaactca acctgggtga cagactctgt ctccaaaaca 1350
 aacacaacaa acaaaaagat ttatttaaag atattttgtt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
 1 5 10 15
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys
 140 145 150
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe
 155 160 165
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn
 170 175 180
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn
 185 190 195
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
 200 205 210
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser
 215 220 225
 Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe
 230 235 240
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser
 245 250 255
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
 260 265 270
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu
 275 280 285
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
 290 295 300
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
 305 310 315
 Asn Lys Lys Arg Lys Lys
 320

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttaccc agccccggga tgcg 24

<210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt ctccaatctg caaatctatg gggctcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac gcgcgcggg ctcttggtac ctccagcgga gccccaggcg 50
tccggccgcc gtggctatgt tcgtgtccga ttcccgcaaa gagttctaac 100
aggtgtgtcca gagccagagg gtccctctct tcgtggcctc ggagctggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacgt ctggttcacg ttctctgggtg gcaagaacct gaaactgcat 250
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
gctaattgtag acctattgga tattcttcaa cctgatgaag acaactatatt 350
ctttgtgtgt gactcccata ggccagtgcaa tgcctgtaac gtatacaacg 400
ataccagatg caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgta gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctcgtg ggaactgcaca cggatctcct ttgagtatga cctccgctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000
aggagtctct tgacagacat ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtctt tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcac caggtctctg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccacagcag 1350
 accattgccg gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu	Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile
260	265	270
Ser Phe Glu Tyr	Asp Leu Arg Leu Val	Ile Tyr Gln His Trp Ser
275	280	285
Leu His Asp Ser	Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe
290	295	300
Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu
305	310	315
Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln
320	325	330
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu
335	340	345
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr
350	355	360
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp
365	370	375
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp
380	385	390
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser
395	400	405
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys
410	415	420
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys
425	430	435
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu
440	445	450
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser
455	460	465
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser
470	475	480
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala
485	490	495
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile Pro
500	505	510
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala
515	520	525
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn
530	535	540
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser
545	550	555
Lys Phe Leu Asp	Ala Leu Ile Ser Leu	Leu Ser

<210> 42
<211> 380
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 44, 118, 172, 183
<223> unknown base

<400> 42
gtacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50
cogatttccg caaagagttc tacgaggttg tccagagcca gagggctcct 100
ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
ggccttggtc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200
ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
tattttattc tcataaactg tggagctaata gtgacacctat tggatattct 300
tcaacctgat gaagacacta tatttcttgt gtgtgacacc cataggccag 350
tcaatgttgt caatgtatac aacgataccc 380

<210> 43
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
ttccgcaaag agttctacga ggtgg 25

<210> 44
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 44
attgacaaca ttgactggcc tatggg 26

<210> 45
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 45
gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgta 50

<210> 46

<211> 3089
<212> DNA
<213> Homo sapiens

<400> 46
caggaaccct ctctttgggt ctggattggg accccctttcc agtaccattt 50
tttctagtga accacgaag gacgatacca gaaaacaccc tcaacccaaa 100
ggaaatagac tacagcccca attggctgac ttggctata gaaaaagaa 150
aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
gagtaacaaa acccccocct cttagctat ttacagcttt taacaattga 250
gtaaagtacg ctccggtcac catggtgaca gcgcgccctg gtcccgtctg 300
ggcagcgctc ctgctcttcc tctgatgtg tgagatccgt atggtggagc 350
tcacctttga cagagctgtg gccagcggct gccaacgggt ctgtgactct 400
gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggcgc 450
ccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
aggggtgaca agggggacca ggcccaatgg gcctgccagg gtacatgggc 550
agggagggtc cccaaggga gcctggccct cagggcagca agggtgacaa 600
gggggagatg ggcagccccc gcgcccctgt ccagaagcgc ttcttcgctt 650
tctcagtggt ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750
gaccggccag ttgtctgtc cctgctgtg catctacttc ttcagcctca 800
atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
cagaagagag ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
tgccgtctct caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
gacacctaca tcaccttcag cggccaacct atcaaggccg aggacgactg 1050
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ccagcacttc taaaacttgg aaatgcctgc gaatcaccgc gggttcgtgt 1350
taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
ttctcatatg ttctgggtg atgctgatgg ggtcagctca tgaaccacac 1450

tggagcaacc aggttctagg actttctcaa tattctagta ctttctgaac 1500
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 tgagacagag tcttgctctg ttgcccaggc tagagtgcag tgggtgcaatc 1600
 tcagttcact gcaacctctg cctcccggtt tcaagcgatt cttctgctc 1650
 agcctcccta gtggctggga ttacaggcgc ctgctaccat gcctggctaa 1700
 tttttgtatt tttagtagag atgggggttc accatattgg ccaggctggt 1750
 cttgaactcc tgacttcagg tgaccacccc gcctcggcct ctcaaatgc 1800
 tgggattaca ggtgtgagcc accgtgctg gccaatteca acattcttaa 1850
 attctctcat cctccaggg ctcccctgc tatgttctct ttaccccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcgccacc gttcatttat 1950
 tcattcatta aacactgagc actcactctg tgcgtgggtcc cgggaagggt 2000
 gaggggtgca gacacaggcc ctgccctgc cctcagtgc tggccagtcc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaaagca gaccagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tctgctggt cctcattac 2150
 ccaactgtcc ccaaggctgg tgggacgggg tcccgggtgc aggggcaggt 2200
 atctcctcc cgttctcat ccacctgccc agtgcctac gttaacagca 2250
 accccagggg gccttgcca ggtcaagggt tctgtgagga gaggaaccag 2300
 gagtgtgggg gcatttggg ggtgaagtgg ccccgaaga atggaacca 2350
 caccatagc tctcccaca gctgatacgg catcctgcga gaagacctgc 2400
 cctcctcact gggatccct cctgcctcc tcccagggt ctgccagggc 2450
 cttgctcagt ccttccacc aaagtcatct gaacttcgt tccccaggg 2500
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 ctggtgtctg ctttacaac acctgcagga gaagggccac ggaagcccca 2700
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<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

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<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

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			20						25						
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp	45
			35						40						
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg	60
			50						55						
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile	75
			65						70						
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			80						85						
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly	105
			95						100						
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys	120
			110						115						
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	135
			125						130						
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	150
			140						145						
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	165
			155						160						
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	180
			170						175						
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	195
			185						190						
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	

	200		205		210
Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg	Val		
	215	220			225
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr	Ser		
	230	235			240
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile	Lys		
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Ala Glu Asp Asp					

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<220>
 <223> Synthetic oligonucleotide probe

<400> 48
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<210> 49
 <211> 23
 <212> DNA
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<220>
 <223> Synthetic oligonucleotide probe

<400> 49
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<210> 50
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 <213> Artificial sequence

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 <211> 2768
 <212> DNA
 <213> Homo sapiens

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 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
 tgcctctgct actggccctg gggcctgggg tgcaggggctg cccatccggc 200
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 aaaagatgaa gtgtgaaa 2768

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 <211> 673
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

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Asp	Leu	Thr	Ala	Asn	Arg	Leu	His	Glu	Ile	Thr	Asn	Glu	Thr	Phe
				110					115					120
Arg	Gly	Leu	Arg	Arg	Leu	Glu	Arg	Leu	Tyr	Leu	Gly	Lys	Asn	Arg
				125					130					135
Ile	Arg	His	Ile	Gln	Pro	Gly	Ala	Phe	Asp	Thr	Leu	Asp	Arg	Leu
				140					145					150
Leu	Glu	Leu	Lys	Leu	Gln	Asp	Asn	Glu	Leu	Arg	Ala	Leu	Pro	Pro
				155					160					165
Leu	Arg	Leu	Pro	Arg	Leu	Leu	Leu	Leu	Asp	Leu	Ser	His	Asn	Ser
				170					175					180
Leu	Leu	Ala	Leu	Glu	Pro	Gly	Ile	Leu	Asp	Thr	Ala	Asn	Val	Glu
				185					190					195
Ala	Leu	Arg	Leu	Ala	Gly	Leu	Gly	Leu	Gln	Gln	Leu	Asp	Glu	Gly
				200					205					210
Leu	Phe	Ser	Arg	Leu	Arg	Asn	Leu	His	Asp	Leu	Asp	Val	Ser	Asp
				215					220					225
Asn	Gln	Leu	Glu	Arg	Val	Pro	Pro	Val	Ile	Arg	Gly	Leu	Arg	Gly
				230					235					240
Leu	Thr	Arg	Leu	Arg	Leu	Ala	Gly	Asn	Thr	Arg	Ile	Ala	Gln	Leu
				245					250					255
Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp
				260					265					270
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly
				275					280					285
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe
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Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu
				305					310					315
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe
				320					325					330
Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala
				335					340					345
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr
				350					355					360
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu
				365					370					375
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro
				380					385					390
Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln
				395					400					405
Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys

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425	430	435
Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
440	445	450
Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr		
455	460	465
Leu Gly Ile Glu Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu		
470	475	480
Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg		
485	490	495
Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr		
500	505	510
Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu		
515	520	525
Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro		
530	535	540
Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr		
545	550	555
Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg		
560	565	570
Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val		
575	580	585
Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg		
590	595	600
Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val		
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Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro		
620	625	630
Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu		
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<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

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<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
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<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
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<211> 811
<212> PRT
<213> Homo sapiens

<400> 57
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35 40 45
Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
50 55 60
Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
65 70 75
Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
80 85 90

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Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp
				425					430					435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu
				440					445					450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu
				455					460					465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp
				470					475					480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile
				485					490					495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser
				500					505					510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg
				515					520					525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser
				530					535					540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr
				545					550					555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His
				560					565					570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val
				575					580					585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His
				590					595					600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln
				605					610					615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Gln	Gln	Leu	Lys	Arg
				620					625					630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser
				635					640					645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp
				650					655					660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly
				665					670					675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr
				680					685					690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp
				695					700					705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu
				710					715					720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725						730				735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgtttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata ctgtgaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

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ccccctgcg ccgccccgc gcctctgcg gccctgtcc gcccgcccc 150
agcccgagccc agccccgcgg gccggtcaca cgcgcagcca gccggccccc 200
tcccgcgccc aagcgcgccg ctctgctgtg ccctgcgccc ttgccccgcg 250
ccagcttctg cgcgcgcagc cgcgcgcggc ccccggtga ccgtgacct 300
gccctggggc cggggcgag caggcatgtc ccgcccggg accgtaccc 350
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 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 Leu Ala Val Thr Leu Ala Gly Val Gly Ala Gln Gly Ala Ala Leu
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 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

185	190	195
Glu Val Asp Ala	Arg Arg Leu Thr Arg	Phe Thr Gly Val Ile Thr
200		210
Gln Gly Arg Asn Ser Leu Trp Leu Ser	Asp Trp Val Thr Ser Tyr	
215	220	225
Lys Val Met Val Ser Asn Asp Ser His	Thr Trp Val Thr Val Lys	
230	235	240
Asn Gly Ser Gly Asp Met Ile Phe Glu	Gly Asn Ser Glu Lys Glu	
245	250	255
Ile Pro Val Leu Asn Glu Leu Pro Val	Pro Met Val Ala Arg Tyr	
260	265	270
Ile Arg Ile Asn Pro Gln Ser Trp Phe	Asp Asn Gly Ser Ile Cys	
275	280	285
Met Arg Met Glu Ile Leu Gly Cys Pro	Leu Pro Asp Pro Asn Asn	
290	295	300
Tyr Tyr His Arg Arg Asn Glu Met Thr	Thr Thr Asp Asp Leu Asp	
305	310	315
Phe Lys His His Asn Tyr Lys Glu Met	Arg Gln Leu Met Lys Val	
320	325	330
Val Asn Glu Met Cys Pro Asn Ile Thr	Arg Ile Tyr Asn Ile Gly	
335	340	345
Lys Ser His Gln Gly Leu Lys Leu Tyr	Ala Val Glu Ile Ser Asp	
350	355	360
His Pro Gly Glu His Glu Val Gly Glu	Pro Glu Phe His Tyr Ile	
365	370	375
Ala Gly Ala His Gly Asn Glu Val Leu	Gly Arg Glu Leu Leu Leu	
380	385	390
Leu Leu Val Gln Phe Val Cys Gln Glu	Tyr Leu Ala Arg Asn Ala	
395	400	405
Arg Ile Val His Leu Val Glu Glu Thr	Arg Ile His Val Leu Pro	
410	415	420
Ser Leu Asn Pro Asp Gly Tyr Glu Lys	Ala Tyr Glu Gly Gly Ser	
425	430	435
Glu Leu Gly Gly Trp Ser Leu Gly Arg	Trp Thr His Asp Gly Ile	
440	445	450
Asp Ile Asn Asn Asn Phe Pro Asp Leu	Asn Thr Leu Leu Trp Glu	
455	460	465
Ala Glu Asp Arg Gln Asn Val Pro Arg	Lys Val Pro Asn His Tyr	
470	475	480
Ile Ala Ile Pro Glu Trp Phe Leu Ser	Glu Asn Ala Thr Val Ala	
485	490	495
Ala Glu Thr Arg Ala Val Ile Ala Trp	Met Glu Lys Ile Pro Phe	

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggc cgggcctctc atttctccta gcccttctgt 50
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cccagccccg gcttcagctc ttcccaggt gttgactcca gctccagett 150
cagctccagc tccaggctcg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggaacct gccagtctc tgtttccctg ccagacacca ctttcccg 300
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 gaatattgcc agagttaacc tgaccaccaa cagatttgcg gtgactcaaa 1100
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 ccacacttca ggtgctaacc acttggtata ccaagcagta taaacctatc 1300
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aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu
1 5 10 15
Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro
20 25 30
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

<213> Homo sapiens
 <220>
 <221> unsure
 <222> 206, 217, 387
 <223> unknown base

 <400> 68
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 cctgtcgtcc accctcctcc cactccaggg agctgtggtc atggtggtgt 100
 ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggttt 150
 cttatctata tgggtgcttg ggtagggtt actctcccca gcatacaaac 200
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 gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
 ctcgagagtt gcggatcacc tatggccaag gtagtggtag agcagtttac 350
 aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
 taacctgacc 410

 <210> 69
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 69
 agctgtggtc atggtggtgt ggtg 24

 <210> 70
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 70
 ctaccttggc cataggtgat ccgc 24

 <210> 71
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 71
 catcagcaaa ccgtctgtg ttcagctcaa ctggagaggg tt 42

 <210> 72
 <211> 3127
 <212> DNA
 <213> Homo sapiens

<400> 72
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 tgggctgtg ctccatggcg agctggatac catgtttgtg tggaaagtcc 150
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 cagttgtctg aaaaatotta taagggttta cccttgatac ggaatttaca 1950
 caggtaggga gtgttttagt gacaatagtg taggttatgg atggagggtg 2000
 cgggtactaa ttgaataacg agtaataaat ctacttggg tagagatggc 2050
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 ggttcagtg aaatgtttg aactctgaag gatttagaca aggttttgaa 2150
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 tagttttggg ccagcagcg tagctcacc ttgtaatcc cagcactttg 2250
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 tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600
 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcatt 2650
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 catgacctat aaacagggtca gaagaatgat ggaatgtttt agaataaaact 2800
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 atttactgcc atgtaatga aatatataga ttattgtaat ctttcaacct 2900
 gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950
 taatgaagct tttaaaatct acaatttctt ctttaaaaa atttattaat 3000
 gtgaatggaa tataacaatt cagottaatt ccccaacott attctgtgtg 3050
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 atgaattcag agaaaaaaa aaaaaa 3127

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr
 290 295 300
 Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala
 305 310 315
 Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr
 320 325 330
 Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr
 335 340 345
 Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg
 350 355 360
 Ser Asp Gly Ser Leu Glu Asp Gly Asp Val His Arg Ala Val
 365 370 375
 Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His
 380 385 390
 Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr
 395 400 405
 Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp
 410 415 420
 Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val
 425 430 435
 Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg
 440 445 450
 Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 cgttgtggag atggggagcg tccctggggc tgtgtccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgtgtcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgaggt atgtgtagct tgtgtaagt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaa gtgttgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350
 tggctatgtt ctatctctt ctctctttac taatgatcaa agtgaagagt 400

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tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
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cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtgaaacaa ntccactgta attagattga tntatgcact 150
tttnttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgccctt gtaacatttt ggttggtctat aaagctgtat atngtttttg 300
ctttggttg gctangttct atnttcttct ctctttacta atgatacaaag 350
tgaagagtag cagtgtatct agagctgcag tgcacaatgg attttggttt 400
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgetcttgt gaacgttntg 50
gagatgggga gcgtccttgg ggttggtctc catggcgagc tggataccat 100
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tctatgttga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt cccttghtaa 300
attttggttg gctataaagc tgttatatctg ttgtgctttg gtttggtctat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtcac aatggatttt ggttctttaa atttgctgca 450
gcaattgcaa ttattattgg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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actttttcct tgcttggttg agtatgtgta gctttgtgta atgttggtcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaagggtgt gtccccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc ttggttttg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggtctt ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaaactt ttacaactgt gtggttttat gtaggcattg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgcc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcaactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccaactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
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gcgggcgggc cgggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggagagtc 150
ctgtgaaagc agataaaaga aaacatttat taactgtgca ttacgagggg 200
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aatccacat ctgtttcaac tctccgcga gggcgagcag gagcgagagt 500
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gacgaactt gagactccc catcccaaaa gaagcaccag atcagcaaaa 600

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 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgacagagac 3700
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 aaacctgtgt tgctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
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 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro Asp Lys His Trp	Ile Met Arg Tyr	Thr Gly Pro Met Lys	Pro
260		265	270
Ile His Met Glu Phe	Thr Asn Met Leu	Gln Arg Lys Arg Leu	Gln
275		280	285
Thr Leu Met Ser Val	Asp Asp Ser Met	Glu Thr Ile Tyr Asn	Met
290		295	300
Leu Val Glu Thr Gly	Glu Leu Asp Asn	Thr Tyr Ile Val Tyr	Thr
305		310	315
Ala Asp His Gly Tyr	His Ile Gly Gln	Phe Gly Leu Val Lys	Gly
320		325	330
Lys Ser Met Pro Tyr	Glu Phe Asp Ile	Arg Val Pro Phe Tyr	Val
335		340	345
Arg Gly Pro Asn Val	Glu Ala Gly Cys	Leu Asn Pro His Ile	Val
350		355	360
Leu Asn Ile Asp Leu	Ala Pro Thr Ile	Leu Asp Ile Ala Gly	Leu
365		370	375
Asp Ile Pro Ala Asp	Met Asp Gly Lys	Ser Ile Leu Lys Leu	Leu
380		385	390
Asp Thr Glu Arg Pro	Val Asn Arg Phe	His Leu Lys Lys Lys	Met
395		400	405
Arg Val Trp Arg Asp	Ser Phe Leu Val	Glu Arg Gly Lys Leu	Leu
410		415	420
His Lys Arg Asp Asn	Asp Lys Val Asp	Ala Gln Glu Glu Asn	Phe
425		430	435
Leu Pro Lys Tyr Gln	Arg Val Lys Asp	Leu Cys Gln Arg Ala	Glu
440		445	450
Tyr Gln Thr Ala Cys	Glu Gln Leu Gly	Gln Lys Trp Gln Cys	Val
455		460	465
Glu Asp Ala Thr Gly	Lys Leu Lys Leu	His Lys Cys Lys Gly	Pro
470		475	480
Met Arg Leu Gly Gly	Ser Arg Ala Leu	Ser Asn Leu Val Pro	Lys
485		490	495
Tyr Tyr Gly Gln Gly	Ser Glu Ala Cys	Thr Cys Asp Ser Gly	Asp
500		505	510
Tyr Lys Leu Ser Leu	Ala Gly Arg Arg	Lys Lys Leu Phe Lys	Lys
515		520	525
Lys Tyr Lys Ala Ser	Tyr Val Arg Ser	Arg Ser Ile Arg Ser	Val
530		535	540
Ala Ile Glu Val Asp	Gly Arg Val Tyr	His Val Gly Leu Gly	Asp
545		550	555
Ala Ala Gln Pro Arg	Asn Leu Thr Lys	Arg His Trp Pro Gly	Ala
560		565	570

Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp Phe Ser Gly Thr
 575 580
 Gly Gly Leu Pro Asp Tyr Ser Ala Ala Asn Pro Ile Lys Val Thr
 590 595 600
 His Arg Cys Tyr Ile Leu Glu Asn Asp Thr Val Gln Cys Asp Leu
 605 610 615
 Asp Leu Tyr Lys Ser Leu Gln Ala Trp Lys Asp His Lys Leu His
 620 625 630
 Ile Asp His Glu Ile Glu Thr Leu Gln Asn Lys Ile Lys Asn Leu
 635 640 645
 Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg Pro Glu Glu Cys
 650 655 660
 Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys Gly Arg Leu
 665 670 675
 Lys His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly Leu Gln
 680 685 690
 Glu Lys Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys
 695 700 705
 Lys Leu Arg Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys
 710 715 720
 Ser Met Pro Gly Leu Thr Cys Phe Thr His Asp Asn Gln His Trp
 725 730 735
 Gln Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr
 740 745 750
 Ser Ala Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu
 755 760 765
 Thr His Asn Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu
 770 775 780
 Tyr Phe Asp Leu Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val
 785 790 795
 Asn Thr Leu Asp Arg Asp Val Leu Asn Gln Leu His Val Gln Leu
 800 805 810
 Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys Gln Cys Asn Pro Arg
 815 820 825
 Thr Arg Asn Met Asp Leu Asp Gly Gly Ser Tyr Glu Gln Tyr Arg
 830 835 840
 Gln Phe Gln Arg Arg Lys Trp Pro Glu Met Lys Arg Pro Ser Ser
 845 850 855
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 860 865

<210> 85
 <211> 19
 <212> DNA

<213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 85
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 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 ggccagctat ctccgcag 18
 <210> 87
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 <212> DNA
 <213> Artificial Sequence
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 aagggcctgc aagagaag 18
 <210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence
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 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggccggtg aatcggttcc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
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gtggcggttc tgctgctgct gctgctgct gccacctgcc tttccacgg 200
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gggcctccac caccaccacc acccccgcca caccctcac cacctccacc 400
accaccacca cccccaccg caccatcccc gccacgctcg ctgaggctgc 450
tgtcgccggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctgggg 550
gaacgagggg aacaatagac tggggcttgc tocagctgca tttgcatggc 600

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 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
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 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
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 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgaagtgc tgggtcacc cccatccgca acgtcactgt ggcctacaag 200
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<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn 45
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr 60
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg 75
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

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 cccgctccat ctgctgctgc tgctgctgct cagtgcggcg gtgtgccggg 150
 ctgaggctgg gctcgaaacc gaaagtcccg tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagccccgtg cttttggaga 250

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 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaaggcca atcattcctt ctacttggc ctatggaaaa cggggatttc 450
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 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
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 20 25 30
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 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
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<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

<400> 100

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cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgcga gcccgctgct tttggagaca 250
cgcttcacat aactacacg ggaagcttgg tagatggagc tattattgac 300
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaagagc gggatttcca 450
ccatctgtcc cagcggatgc agtgggtcag tatgacgttg agctgattgc 500
actaatcoga gcoactact ggctaaagct ggtgaaggcg attttgcctc 550
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatatcacc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaacagaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

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cacgggaagc ttggtagatg gacgtattat tgacacotcc otgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccaccatct gtccagcgg 300
atgcagtggt gcagtatgac gtggagctga ttgcaactat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctctgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaag 500
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
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 ccaatgcacg acgggggtcg actgacctga aaaaaatgct tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgtctcc attgtgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatccacca tgaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcccta tgattaatgc 350
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 gtcaaacagg tgctcgcat tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcct tttggaggtt atgttgctaa 500
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 aacttatttc tgagtgtagt ctacagctta agttgtgtaa tactaaaac 750
 acgagaacac ctacaacaac accaaaaatc tattgtggtta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataa ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataa aagaattac aaaagaatt 900
 atggatttgt caatgtaagt atttgcata tctgaggtcc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaaatttcc 1050
 gtggtcaaaa ttcttctca ctataatttg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg aggtctctcc aagggtgtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200
 tgtcccttcc atgggaaggt ctccgctgt gccctctcatt ccaagggcag 1250
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tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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           20           25           30
Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
           35           40           45
Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
           50           55           60
Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
           65           70           75
Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
           80           85           90
Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
           95          100          105
Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
          110          115          120
Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
          125          130          135
Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
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Arg Thr Glu Asp Leu Trp Gln
          155
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<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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agcgaataac tattgcttcc attgtgctg gtgtactatt ttttacaggc 200
tgggtggatta tcatagatgc agctgttatt tatccacca tgaagattt 250
caaccactca taccatgcct gtggtgttat agcaaccata gccttcttaa 300
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ggtgtctcgg gtcaaacagg tgctcgatt tggcttttcg ttggtttcat 400
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gttgcccttt ggatctctga ttgcatctat gtggattctt tttggagggtt 450
atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
cagaatgcct tcatcttttt tggagggtcg gtttttaagt ttggc 545

<210> 105
<211> 490
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 39, 108, 145, 179, 219, 412, 479
<223> unknown base

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tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
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<210> 106
<211> 466
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449
<223> unknown base

<400> 106
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acagggtggt ggattatcat agatgcagct gttatttato ccaccatgaa 200
agatttnaac cactcatacc atgcctgtgg tgttatagca acoatagcct 250
tctaatagat taatgcagta tcgaatggac aagtcgagg tgatagttac 300
agtgaagggt gtttgggtca aacagggtnt cgcatttggc ttttcgttgg 350
tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400

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atttttocag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggtgtt 250

tgggtcaaac aggtgntngc atttggcttt tngttggttt catgttggtcc 300

tttgatctn tgattgcatt tatgtggatt ntttttggag gttatgttgc 350

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<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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tgggtgtacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

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atagcaacca tagccttcct aatgattaat gcagtatcga atggacaagt 350

cggaggtgat agttacagtg aaggttgtct gggtaacaa ggtgctcgca 400

tttggctttt cgttggtttc atgttggcct ttggaatnct gattgcatct 450

atgtggatto tttttggagg ttatgttgc aaagaaaaag acatagtata 500

ccctgaatt gctgtatntt tccagaatgc cttcatnttt tttggagggc 550

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

95

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 aagccttatt caccaaatac acaggggaagg gtgtgcagg gaagggtgac 2650
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 ggtagacag gtaggatgaat gcaagctcaa ggtttggaaa aatgactttt 2900
 cagttatgtc tttggatca gacatacga aggtctcttt gtagtctgtg 2950
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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly 110	Lys	Asn	Gly	Leu	Glu 115	Phe	Asp	Thr	Gly	Ile 120
His	Tyr	Ile	Gly	Arg 125	Met	Glu	Glu	Gly	Ser 130	Ile	Gly	Arg	Phe	Ile 135
Leu	Asp	Gln	Ile	Thr 140	Glu	Gly	Gln	Leu	Asp 145	Trp	Ala	Pro	Leu	Ser 150
Ser	Pro	Phe	Asp	Ile 155	Met	Val	Leu	Glu	Gly 160	Pro	Asn	Gly	Arg	Lys 165
Glu	Tyr	Pro	Met	Tyr 170	Ser	Gly	Glu	Lys	Ala 175	Tyr	Ile	Gln	Gly	Leu 180
Lys	Glu	Lys	Phe	Pro 185	Gln	Glu	Glu	Ala	Ile 190	Ile	Asp	Lys	Tyr	Ile 195
Lys	Leu	Val	Lys	Val 200	Val	Ser	Ser	Gly	Ala 205	Pro	His	Ala	Ile	Leu 210
Leu	Lys	Phe	Leu	Pro 215	Leu	Pro	Val	Val	Gln 220	Leu	Leu	Asp	Arg	Cys 225
Gly	Leu	Leu	Thr	Arg 230	Phe	Ser	Pro	Phe	Leu 235	Gln	Ala	Ser	Thr	Gln 240
Ser	Leu	Ala	Glu	Val 245	Leu	Gln	Gln	Leu	Gly 250	Ala	Ser	Ser	Glu	Leu 255
Gln	Ala	Val	Leu	Ser 260	Tyr	Ile	Phe	Pro	Thr 265	Tyr	Gly	Val	Thr	Pro 270
Asn	His	Ser	Ala	Phe 275	Ser	Met	His	Ala	Leu 280	Leu	Val	Asn	His	Tyr 285
Met	Lys	Gly	Gly	Phe 290	Tyr	Pro	Arg	Gly	Gly 295	Ser	Ser	Glu	Ile	Ala 300
Phe	His	Thr	Ile	Pro 305	Val	Ile	Gln	Arg	Ala 310	Gly	Gly	Ala	Val	Leu 315
Thr	Lys	Ala	Thr	Val 320	Gln	Ser	Val	Leu	Ser 325	Asp	Ser	Ala	Gly	Lys 330
Ala	Cys	Gly	Val	Ser 335	Val	Lys	Lys	Gly	His 340	Glu	Leu	Val	Asn	Ile 345
Tyr	Cys	Pro	Ile	Val 350	Val	Ser	Asn	Ala	Gly 355	Leu	Phe	Asn	Thr	Pro 360
Glu	His	Leu	Leu	Pro 365	Gly	Asn	Ala	Arg	Cys 370	Leu	Pro	Gly	Val	Lys 375
Gln	Gln	Leu	Gly	Thr 380	Val	Arg	Pro	Gly	Leu 385	Gly	Met	Thr	Ser	Val 390
Phe	Ile	Cys	Leu	Arg 395	Gly	Thr	Lys	Glu	Asp 400	Leu	His	Leu	Pro	Ser 405
Thr	Asn	Tyr	Tyr	Val 410	Tyr	Tyr	Asp	Thr	Asp 415	Met	Asp	Gln	Ala	Met 420

Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile	425	430	435
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp	440	445	450
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro	455	460	465
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly	470	475	480
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu	485	490	495
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly	500	505	510
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe	515	520	525
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp	530	535	540
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln	545	550	555
Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr	560	565	570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser	575	580	585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp	590	595	600
Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn						605	610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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 gatagggtcg acgctgctgc tgtgtgcggt gctgctgago ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccagatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgtcggt caaatatttc ttgattcaga agaactgtaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaagagg gaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaccagc ttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
 tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
 tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600
 aagaagagggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
 caaactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
 agaagcatat cggtatctcc aaaaggcagc aagcatgaac cataccaaaag 750
 ccttgagag agtgtcatat gctcttttat ttggtgatta ctgcccacag 800
 aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
 tcccaaggga cagactgctc ttggctttct gtatgcctct ggacttgggtg 900
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 gggggcaatc taatagccca catgggtttg gtaagtagac tttagtggaa 1000
 ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
 tttttcagct ttcattgatcc agatttgctt gtattaagac caaatattca 1100
 gttgaacttc cttcaaatc ttgttaattg atatacaca tggaaactac 1150
 atgtaaatga aagttgtgtg agtccacaat ttttctttaa aatgattagt 1200
 ttggctgatt gccctaaaa agagagatct gataaatggc tctttttaaa 1250
 ttttctctga gttggaattg tcagaatcat tttttacatt agattatcat 1300
 aattttaaaa atttttctt agtttttcaa aattttgtaa atgggtggcta 1350
 tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
 aattgttaaa attcatggag ttatttgtgc agaatactc cagagagctc 1450
 tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
 gtcattttatt gctagtgaac ctgtgcctgc ttccagtagt ctcatatttc 1550
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700

a 1701

<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met Arg Val Arg Ile Gly Leu Thr Leu Leu Cys Ala Val Leu
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Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp
 20 25 30

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

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 agctggatgc actgctggto ttcccaggcc aagtgggtca actctcctgc 200
 acgctcagcc ccagcacgt caccatcagg gactacggtg tgtcctggta 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggagatga ccaccggcct gctgacatcc cogatcgatt ctggcagacc 350
 aaggatgagg ccacaaatgc ctgtgtcctc accattagtc cgtgcagacc 400
 tgaagacgac gcggattact actgctctgt tggtacgggc tttagtccct 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
 ctgaccttgg gtcctcttta aactttctct gagccttgct tccctctgt 550
 aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
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 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Pro Pro Leu Leu
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 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	245	250	255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	260	265	270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	275	280	285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	290	295	300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	305	310	315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	320	325	330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	335	340	345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	350	355	360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	365	370	375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	380	385	390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	395	400	405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	410	415	420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	425	430	435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	440	445	450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	455	460	465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr	470	475	480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys	485	490	495
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys							500		

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccc ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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 <213> Homo sapiens

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 35 40 45
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe
 50 55 60
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp
 65 70 75
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu
 80 85 90
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr
 95 100 105
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu
 110 115 120
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val
 125 130 135
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg
 140 145 150
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys
 155 160 165
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu
 170 175 180
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys
 185 190 195
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly
 200 205 210

Gln	Val	Asn	Ala	Asp 215	Cys	Asp	Ala	Cys	Met 220	Cys	Gln	Asp	Phe	Met 225
Leu	His	Gly	Ala	Val 230	Leu	Ser	Leu	Pro	Gly 235	Ala	Pro	Ala	Ser	Gly 240
Ala	Ala	Ile	Tyr	Leu 245	Leu	Thr	Lys	Thr	Pro 250	Lys	Leu	Leu	Thr	Gln 255
Thr	Asp	Ser	Asp	Gly 260	Arg	Phe	Arg	Ile	Pro 265	Gly	Leu	Cys	Pro	Asp 270
Gly	Lys	Ser	Ile	Leu 275	Lys	Ile	Thr	Lys	Val 280	Lys	Phe	Ala	Pro	Ile 285
Val	Leu	Thr	Met	Pro 290	Lys	Thr	Ser	Leu	Lys 295	Ala	Ala	Thr	Ile	Lys 300
Ala	Glu	Phe	Val	Arg 305	Ala	Glu	Thr	Pro	Tyr 310	Met	Val	Met	Asn	Pro 315
Glu	Thr	Lys	Ala	Arg 320	Arg	Ala	Gly	Gln	Ser 325	Val	Ser	Leu	Cys	Gly 330
Lys	Ala	Thr	Gly	Lys 335	Pro	Arg	Pro	Asp	Lys 340	Tyr	Phe	Trp	Tyr	His 345
Asn	Asp	Thr	Leu	Leu 350	Asp	Pro	Ser	Leu	Tyr 355	Lys	His	Glu	Ser	Lys 360
Leu	Val	Leu	Arg	Lys 365	Leu	Gln	Gln	His	Gln 370	Ala	Gly	Glu	Tyr	Phe 375
Cys	Lys	Ala	Gln	Ser 380	Asp	Ala	Gly	Ala	Val 385	Lys	Ser	Lys	Val	Ala 390
Gln	Leu	Ile	Val	Thr 395	Ala	Ser	Asp	Glu	Thr 400	Pro	Cys	Asn	Pro	Val 405
Pro	Glu	Ser	Tyr	Leu 410	Ile	Arg	Leu	Pro	His 415	Asp	Cys	Phe	Gln	Asn 420
Ala	Thr	Asn	Ser	Phe 425	Tyr	Tyr	Asp	Val	Gly 430	Arg	Cys	Pro	Val	Lys 435
Thr	Cys	Ala	Gly	Gln 440	Gln	Asp	Asn	Gly	Ile 445	Arg	Cys	Arg	Asp	Ala 450
Val	Gln	Asn	Cys	Cys 455	Gly	Ile	Ser	Lys	Thr 460	Glu	Glu	Arg	Glu	Ile 465
Gln	Cys	Ser	Gly	Tyr 470	Thr	Leu	Pro	Thr	Lys 475	Val	Ala	Lys	Glu	Cys 480
Ser	Cys	Gln	Arg	Cys 485	Thr	Glu	Thr	Arg	Ser 490	Ile	Val	Arg	Gly	Arg 495
Val	Ser	Ala	Ala	Asp 500	Asn	Gly	Glu	Pro	Met 505	Arg	Phe	Gly	His	Val 510
Tyr	Met	Gly	Asn	Ser 515	Arg	Val	Ser	Met	Thr 520	Gly	Tyr	Lys	Gly	Thr 525

Lys	Phe	Asn	Pro	Asn 845	Ala	Ile	Gly	Val	Pro 850	Gln	Pro	Tyr	Leu	Asn 855
Lys	Leu	Asn	Tyr	Arg 860	Arg	Thr	Asp	His	Glu 865	Asp	Pro	Arg	Val	Lys 870
Lys	Thr	Ala	Phe	Gln 875	Ile	Ser	Met	Ala	Lys 880	Pro	Arg	Pro	Asn	Ser 885
Ala	Glu	Glu	Ser	Asn 890	Gly	Pro	Ile	Tyr	Ala 895	Phe	Glu	Asn	Leu	Arg 900
Ala	Cys	Glu	Glu	Ala 905	Pro	Pro	Ser	Ala	Ala 910	His	Phe	Arg	Phe	Tyr 915
Gln	Ile	Glu	Gly	Asp 920	Arg	Tyr	Asp	Tyr	Asn 925	Thr	Val	Pro	Phe	Asn 930
Glu	Asp	Asp	Pro	Met 935	Ser	Trp	Thr	Glu	Asp 940	Tyr	Leu	Ala	Trp	Trp 945
Pro	Lys	Pro	Met	Glu 950	Phe	Arg	Ala	Cys	Tyr 955	Ile	Lys	Val	Lys	Ile 960
Val	Gly	Pro	Leu	Glu 965	Val	Asn	Val	Arg	Ser 970	Arg	Asn	Met	Gly	Gly 975
Thr	His	Arg	Arg	Thr 980	Val	Gly	Lys	Leu	Tyr 985	Gly	Ile	Arg	Asp	Val 990
Arg	Ser	Thr	Arg	Asp 995	Arg	Asp	Gln	Pro	Asn 1000	Val	Ser	Ala	Ala	Cys 1005
Leu	Glu	Phe	Lys	Cys 1010	Ser	Gly	Met	Leu	Tyr 1015	Asp	Gln	Asp	Arg	Val 1020
Asp	Arg	Thr	Leu	Val 1025	Lys	Val	Ile	Pro	Gln 1030	Gly	Ser	Cys	Arg	Arg 1035
Ala	Ser	Val	Asn	Pro 1040	Met	Leu	His	Glu	Tyr 1045	Leu	Val	Asn	His	Leu 1050
Pro	Leu	Ala	Val	Asn 1055	Asn	Asp	Thr	Ser	Glu 1060	Tyr	Thr	Met	Leu	Ala 1065
Pro	Leu	Asp	Pro	Leu 1070	Gly	His	Asn	Tyr	Gly 1075	Ile	Tyr	Thr	Val	Thr 1080
Asp	Gln	Asp	Pro	Arg 1085	Thr	Ala	Lys	Glu	Ile 1090	Ala	Leu	Gly	Arg	Cys 1095
Phe	Asp	Gly	Thr	Ser 1100	Asp	Gly	Ser	Ser	Arg 1105	Ile	Met	Lys	Ser	Asn 1110
Val	Gly	Val	Ala	Leu 1115	Thr	Phe	Asn	Cys	Val 1120	Glu	Arg	Gln	Val	Gly 1125
Arg	Gln	Ser	Ala	Phe 1130	Gln	Tyr	Leu	Gln	Ser 1135	Thr	Pro	Ala	Gln	Ser 1140
Pro	Ala	Ala	Gly	Thr 1145	Val	Gln	Gly	Arg	Val 1150	Pro	Ser	Arg	Arg	Gln 1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

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<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ccattgtgca ggtcagggtca cag 23

<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtgggtc gactgggggtc 40

<210> 128

<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

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 ctacctacc gtacgcatac atacatatgt gtatatatat gtaaactaga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
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 ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtgttg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100
 ccctogttgg ttgaagatt tctttgtctg atgttagtga tgcacatgtg 2150
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 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129
 <211> 438
 <212> PRT
 <213> Homo sapiens

<400> 129
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 Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp
 35 40 45
 Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr
 50 55 60
 Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro
 65 70 75
 Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn
 80 85 90
 Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu
 95 100 105
 Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser
 110 115 120
 Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

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 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 130
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 <210> 131
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 <220>
 <223> Synthetic oligonucleotide probe

 <400> 131
 ttctgagatc cctcatcctc 20

 <210> 132
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 132
 aggttcaggg acagcaagtt tggg 24

 <210> 133
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 133
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 <210> 134
 <211> 1493
 <212> DNA
 <213> Homo sapiens

 <400> 134
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 ccgggcgagg tgtcctcatg acttctcttg tggaccatgt cegtgtatct 150
 ttttgctctg gtggtacggg taagggatgg actgccctc tcagcctcta 200
 ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
 agtttagcct tgcgactggc ccagtatcca ggtcgaggtt ctgcagaagg 300

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tcagtagtac	aacctaaact	tgtataaaaa	tgtgtaaaaa	tgtatagcca	1400
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<210> 135

<400> 135

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 65 70 75
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu
 80 85 90
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu
 95 100 105
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln
 110 115 120
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu
 125 130 135
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro
 140 145 150
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met
 155 160 165
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg
 170 175 180
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn
 185 190 195
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala
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 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp
 215 220 225
 Gln Thr Ser

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
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 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
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<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

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ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaaag cccctaggct gggctgggt gottggcggc ggcggcttcc 250
tccccctcgc tcctccccgc gccagaggc acctcggtt cagtcatgct 300
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caacactgta catcctctgc cacatcttcc tgaccgcgtt caagaagcct 450
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ccttgttttt ctcttcccca acctgtccct catcttctcc atgccctttg 700
catatttctt cactgagtct gagggttttg ctggctccag aaagggtgtc 750
ctgggccggg tctatgagac agtggtgatg ttgatgtccc tactctgct 800
ggtgtcaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcaactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
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cccggctgct ggaagacctg gaggagcagc tgtactgtcc agcctttgag 1050
gaggcagccc tgaccgcag gatctgtaat cctacttctt gctggctgcc 1100
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ggctaccccc tggctatgct gtgcttgctg gtgctgacgg gctgtgtgt 1250
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ctgggctcct ttggtgccgt cattcaggtt gtactcatct ttacctaata 1400
ggtgtcctca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450
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 gaaaaaactg gacctgccca tctgtgcctc aggcctggag ggaagcccaa 1850
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 tgtgcaatag ggtggggtag gggcagggaagg aggactgggc cagggcaggc 2150
 tcggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138
 <211> 489
 <212> PRT
 <213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
1				5						10				15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
	20							25						30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
	35							40						45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
	50							55						60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
	65							70						75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
	80							85						90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
	95							100						105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
	110							115						120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

125					130					135					
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg	150
140										145					
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val	165
155										160					
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys	180
170										175					
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro	195
185										190					
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu	210
200										205					
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly	225
215										220					
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln	240
230										235					
Leu	Tyr	Cys	Ser	Ala	Phe	Glu	Glu	Ala	Ala	Leu	Thr	Arg	Arg	Ile	255
245										250					
Cys	Asn	Pro	Thr	Ser	Cys	Trp	Leu	Pro	Leu	Asp	Met	Glu	Leu	Leu	270
260										265					
His	Arg	Gln	Val	Leu	Ala	Leu	Gln	Thr	Gln	Arg	Val	Leu	Leu	Glu	285
275										280					
Lys	Arg	Arg	Lys	Ala	Ser	Ala	Trp	Gln	Arg	Asn	Leu	Gly	Tyr	Pro	300
290										295					
Leu	Ala	Met	Leu	Cys	Leu	Leu	Val	Leu	Thr	Gly	Leu	Ser	Val	Leu	315
305										310					
Ile	Val	Ala	Ile	His	Ile	Leu	Glu	Leu	Leu	Ile	Asp	Glu	Ala	Ala	330
320										325					
Met	Pro	Arg	Gly	Met	Gln	Gly	Thr	Ser	Leu	Gly	Gln	Val	Ser	Phe	345
335										340					
Ser	Lys	Leu	Gly	Ser	Phe	Gly	Ala	Val	Ile	Gln	Val	Val	Leu	Ile	360
350										355					
Phe	Tyr	Leu	Met	Val	Ser	Ser	Val	Val	Gly	Phe	Tyr	Ser	Ser	Pro	375
365										370					
Leu	Phe	Arg	Ser	Leu	Arg	Pro	Arg	Trp	His	Asp	Thr	Ala	Met	Thr	390
380										385					
Gln	Ile	Ile	Gly	Asn	Cys	Val	Cys	Leu	Leu	Val	Leu	Ser	Ser	Ala	405
395										400					
Leu	Pro	Val	Phe	Ser	Arg	Thr	Leu	Gly	Leu	Thr	Arg	Phe	Asp	Leu	420
410										415					
Leu	Gly	Asp	Phe	Gly	Arg	Phe	Asn	Trp	Leu	Gly	Asn	Phe	Tyr	Ile	435
425										430					
Val	Phe	Leu	Tyr	Asn	Ala	Ala	Phe	Ala	Gly	Leu	Thr	Thr	Leu	Cys	

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttggttgct tggcggcggc 50
 ggnnttcctcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtgc ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaacacct 200
 ctgtttgcaa cactgtacat cctctgccac atcttcctga cccgcttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcggttggt gcctgccctt taaggcgagg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggcgtcgag gaaaggcccc 150
 taggctgggt ctggtgcttg gcggcgcgcg ctctctcccc gttgtcntcc 200
 ccggggccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatatc aacactttctg tttgcaacac tgtacatcnt 350
 ctgccacatc ttcctgaccc gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccctgg caattgccct ggggtgctgc ctgctcctgc ccttctccat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagcoccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
tggtccaggt cttcatgctg ctgtgggtga tattaactgt cctggctcct 150
gtcagtggaac agtttgcaag gacaccacagg cccattattt tcctccagcc 200
tccatggacc acagtccttc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacctt 300
 gggaagaaaa tactaagaga aaccccagac aatataccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttectcatgc tgcccaggct 450
 aatgttgaac tcttgggctc aagtgatctg ctcacatagg cctctcaaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcggg agtaaacctg 600
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
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 ccccccggt gtgaggcggc ctcacagggc cggtgtgggt gccgagccga 100
 cgcgcgcgcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgccggacga gattttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaaggcc tataggaaac 300
 tagccctcga gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtaga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttcttttg ggattttggt 500
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550
 aagtgtatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggaacca ccagctggg 700
 ccctgggcgc ttccaaatga ccagagggt ggtctgcgac gaatgcccta 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
 cgtggatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggtcttgag atggatatta ctacttgga 1000
 tggtcacaag gtacatatatt cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggtcctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggccttaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400
 ccatttgcac tcggaaaaga atgaccagca aaagggttac taatacctct 1450
 ccctttgggg attttaatgtc tgggtgtgco gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gaggggttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met Ala Pro Gln Asn Leu Ser Thr Phe Cys Leu Leu Leu Leu Tyr
1 5 10 15
Leu Ile Gly Ala Val Ile Ala Gly Arg Asp Phe Tyr Lys Ile Leu
20 30
Gly Val Pro Arg Ser Ala Ser Ile Lys Asp Ile Lys Lys Ala Tyr
35 40 45
Arg Lys Leu Ala Leu Gln Leu His Pro Asp Arg Asn Pro Asp Asp
50 55 60
Pro Gln Ala Gln Glu Lys Phe Gln Asp Leu Gly Ala Ala Tyr Glu
65 70 75
Val Leu Ser Asp Ser Glu Lys Arg Lys Gln Tyr Asp Thr Tyr Gly
80 85 90
Glu Glu Gly Leu Lys Asp Gly His Gln Ser Ser His Gly Asp Ile
95 100 105
Phe Ser His Phe Phe Gly Asp Phe Gly Phe Met Phe Gly Gly Thr
110 115 120
Pro Arg Gln Gln Asp Arg Asn Ile Pro Arg Gly Ser Asp Ile Ile
125 130 135
Val Asp Leu Glu Val Thr Leu Glu Glu Val Tyr Ala Gly Asn Phe
140 145 150
Val Glu Val Val Arg Asn Lys Pro Val Ala Arg Gln Ala Pro Gly
155 160 165
Lys Arg Lys Cys Asn Cys Arg Gln Glu Met Arg Thr Thr Gln Leu
170 175 180
Gly Pro Gly Arg Phe Gln Met Thr Gln Glu Val Val Cys Asp Glu
185 190 195
Cys Pro Asn Val Lys Leu Val Asn Glu Glu Arg Thr Leu Glu Val
200 205 210
Glu Ile Glu Pro Gly Val Arg Asp Gly Met Glu Tyr Pro Phe Ile
215 220 225
Gly Glu Gly Glu Pro His Val Asp Gly Glu Pro Gly Asp Leu Arg
230 235 240
Phe Arg Ile Lys Val Val Lys His Pro Ile Phe Glu Arg Arg Gly
245 250 255
Asp Asp Leu Tyr Thr Asn Val Thr Ile Ser Leu Val Glu Ser Leu
260 265 270
Val Gly Phe Glu Met Asp Ile Thr His Leu Asp Gly His Lys Val
275 280 285
His Ile Ser Arg Asp Lys Ile Thr Arg Pro Gly Ala Lys Leu Trp
290 295 300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
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 gntgcgaccg aagcgccggg cggaggaggt ttgaggatt ttggaacag 100
 gaccgccaga gaggaaccat ggttccgcag aacntgagca cnttttgctt 150
 gttgntgnta tacttcacg gggcggtgat tgcgcgagca gatttntata 200
 agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccgag gagaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
 ggatttttgt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggc ggcggggcag tcgcgggatg cgcgggggag ccacagcctg 50
 aggcctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtccaggc cccctctgaa gcatggagac tgtgtgatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttctg ttgcagcctt 250
 ggtgtgtggt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggacctca ttggtgcoat ggagaccag 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
 cattgagccc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
 tcatgtccca ctgcattgcc atcttgaaga ttgtcacac tctgacagag 500
 aagcttgttg ccatgacaat gggctctggg gccaaagatga agacttcagc 550
 cagtgtcagc gacatcattg tgggtggcaa gcggatcagc cccaggggtg 600
 atgatgttgt gaagtogatg taccctccgt tggaccccaa actcctggac 650
 gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctgggtgac 700
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
 tgtcggctgc tgaggagcat ttggaagtcc ttgcagaagc agccctagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gtctgcaatt tagtgcctac agggccagcag ctagccatga aggccctgc 900
 cgccatccct ggatggctca gcttagcctt ctacttttc ctatagagt 950
 agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
 gagatcccc tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
 gagtggcagt ctaatactac agttagggga gatgccatc actctctgca 1100
 agaggagtat tgaaaactgg tggactgtca gctttatata gtcacactag 1150
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
 taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
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 aggtttgggt ttgaagctga ggaactacaa agttgatgat tcttttttta 1450
 tctttatgcc tgcaatttta ctagctacc actaggtgga tagtaaat 1500
 atacttatgt ttccctcaaa aaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile
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Phe	Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg
				20					25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu	Thr Gln Ser Glu Pro Ser	
	50	55	60
Glu Leu Glu Leu Asp	Asp Val Val Ile	Thr Asn Pro His Ile Glu	
	65	70	75
Ala Ile Leu Glu Asn	Glu Asp Trp Ile	Glu Asp Ala Ser Gly Leu	
	80	85	90
Met Ser His Cys Ile	Ala Ile Leu Lys	Ile Cys His Thr Leu Thr	
	95	100	105
Glu Lys Leu Val Ala	Met Thr Met Gly	Ser Gly Ala Lys Met Lys	
	110	115	120
Thr Ser Ala Ser Val	Ser Asp Ile Ile	Val Val Ala Lys Arg Ile	
	125	130	135
Ser Pro Arg Val Asp	Asp Val Val Lys	Ser Met Tyr Pro Pro Leu	
	140	145	150
Asp Pro Lys Leu Leu	Asp Ala Arg Thr	Thr Ala Leu Leu Ser	
	155	160	165
Val Ser His Leu Val	Leu Val Thr Arg	Asn Ala Cys His Leu Thr	
	170	175	180
Gly Gly Leu Asp Trp	Ile Asp Gln Ser	Leu Ser Ala Ala Glu Glu	
	185	190	195
His Leu Glu Val Leu	Arg Glu Ala Ala	Leu Ala Ser Glu Pro Asp	
	200	205	210
Lys Gly Leu Pro Gly	Pro Glu Gly Phe	Leu Gln Glu Gln Ser Ala	
	215	220	225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tcgccgtgt cccaccact gcagccatga tctctttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttga gtgttttttc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctatttga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtc cttattggtt ggcccttgat aggcgatgac ttcgaaattt 350
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 tatttcagtg tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
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<210> 153

<211> 138

<212> PRT

<213> Homo sapiens

<220>

<221> N-myristoylation Sites

<222> 11-16, 51-56 and 116-121

<223> N-myristoylation Sites.

<220>

<221> Transmembrane domains

<222> 12-30, 33-52, 69-89 and 93-109

<223> Transmembrane domains

<220>

<221> Aminoacyl-transfer RNA Synthetases.

<222> 49-59

<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153

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			20						25				30	

Asp	Lys	Ala	Leu	Leu	Ala	Ile	Gly	Asn	Val	Leu	Phe	Val	Ala	Gly
			35						40				45	

Leu	Ala	Phe	Val	Ile	Gly	Leu	Glu	Arg	Thr	Phe	Arg	Phe	Phe	Gly
			50						55				60	

Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
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Asn Met Val

<210> 154
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 <212> DNA
 <213> Homo sapiens

<220>
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 <222> 66
 <223> unknown base

<400> 154
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 <212> DNA
 <213> Homo sapiens

<400> 155
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<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

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				20					25					30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	
				35					40					45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	
				50					55					60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	
				65					70					75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	
				80					85					90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	
				95					100					105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	
				110					115					120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	
				125					130					135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	
				140					145					150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	
				155					160					165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	
				170					175					180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	
				185					190					195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	
				200					205					210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	
				215					220					225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	
				230					235					240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	
				245					250					255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	
				260					265					270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	
				275					280					285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val	

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala		
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
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365	370	375

Leu Asn Asp

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
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 aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
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<210> 158
 <211> 409
 <212> PRT
 <213> Homo sapiens

<400> 158

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Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	110	115	120
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	125	130	135
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	140	145	150
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	155	160	165
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	170	175	180
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	185	190	195
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	200	205	210
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	215	220	225
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	230	235	240
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	245	250	255
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	260	265	270
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	275	280	285
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	290	295	300
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	305	310	315
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	320	325	330
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	335	340	345
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	350	355	360
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	365	370	375
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	380	385	390
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	395	400	405
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<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 gctagagggg cctttcaaca ttgaatcggt catggatccc atcgatgtga 1450

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Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys	
				50					55					60	
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr	
				65					70					75	
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln	
				80					85					90	
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe	
				95					100					105	
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	
				110					115					120	
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn	
				125					130					135	
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr	
				140					145					150	
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	
				155					160					165	
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr	
				170					175					180	
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu	
				185					190					195	
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln	
				200					205					210	
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu	
				215					220					225	
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro	
				230					235					240	
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser	
				245					250					255	
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys	
				260					265					270	
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp	
				275					280					285	
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu	
				290					295					300	
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	
				305					310					315	
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser	
				320					325					330	
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys	
				335					340					345	
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala	

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<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
gggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
atgtccatcg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcga agatttggtc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcccc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgcccaact cttccaatta aacatttcta 550
gccaaagaag cagtgagcac acctaccaga cactcttctt ctccacctc 600
actctcccac tgtaccacc cctaaatcat tccagtgtgc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt ctcttctct 700
cgctagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaagatt ccaggaaact gttagcttct agctagtgtc atttaacctt 800
aaatgcaatc aggaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcoctgacagt tgctcctggga ctgcttgtct 50
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 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tctgggacaa 300
 tccaagagca gccaaatcct gcttttccag ttgggtcca caagtcctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaa ttagaataaa tatggcgctt tgggatacaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys	80		85		

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50
 ggaagcacag ctcagagctg gtctgccatg gacatccttg tccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccttg tgcaaaagct acttccctca cctgatggcc 200
 gtgctgactc ccaagagcaa cgcgaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctcgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta ccacccgggc 350
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg ttgtggtggtg 450
 ctctctgaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500
 gtctgcactc tgggtgctgt ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctggggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccacct ggaaacacat tggggatggc tgetgcctca ccagagagac 700
 ctggaaggat cttgagaacg ccagttctc cgaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcactcattt gtcctctccc 850
 cagcctccaa ttagaacaag cccccacca gcctatctat cttccactga 900
 gagggacctc gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaactcaa tcccgccttc 1000
 gacagtgaaa aagctctact tctacgtgta cccaggggag aaacactagg 1050
 accctgttgt atctccaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gtcctctctg 1150
 ctttcctcct gaggtacac ccatgcgtct ctaggaactg gtcacaaaag 1200
 tcatgggtgc tgcattccctg ccaagccccc ctgacctctc ctccccacta 1250
 ccacctctct cctgagctgg gggcaccagg gagaatcaga gatgtggggg 1300
 atgccagagc aagactcaaa gaggcagagg tttgtttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu	15
1				5					10						
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	30
				20						25					
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	45
				35						40					
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	60
				50					55						
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	75
				65						70					
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	90
				80					85						
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	105
				95					100						
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	120
				110					115						
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	135
				125					130						
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	150
				140					145						
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	165
				155					160						
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	180
				170					175						
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	195
				185					190						
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	210
				200					205						
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	225
				215					220						

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
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 cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctctctttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtcccaaa tgctctcga catgcagtag atgggagaca agaggagatt 350
 cctgtgtgta tgcgtgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagaca aactcgcgc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaaacttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaatcc tgggtcccag cgcaaagaag 650
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
 ttacaataca gcaactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgatttcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
 aattacattg gctatcttga ctataaaaag gaaagaatcc gtaagcttcc 850
 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaac 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
 aaactcaatg tagaagaggg actgtatagc agaacccttg ctggtagcat 1000
 cacaacacct cctctgttta tcgtatttta tcaacagcac tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgcctg aaaacgatat 1100
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaca taaagtgaag cagaatttga actgtaagca agcattttctc 1300
 aggaagtctc ggaagatagc atgcatggga agtaacagtt gctagggttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaaac ttacattttt c 1621

<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val
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Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser
				20					25					30
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
				35					40					45
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
				50					55					60
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
				65					70					75
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
				80					85					90
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
				95					100					105
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
				110					115					120
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
				125					130					135
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
				140					145					150
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
				155					160					165
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
				170					175					180
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala

	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg			
	200		205		210
Gly Ala Gly Asn	Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys			
	215		220		225
Lys Glu Arg Ile	Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser			
	230		235		240
Phe Asn Pro Gly	Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg			
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val			
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr			
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp			
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg			
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn			
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val			
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu			
	350		355		360
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
	365		370		

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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aggttacaga ttcaggaatt ntaggnccctc aacctntaga ntttgtccca 100

aatgtttctcc gacatgcagt agatgggaga caagaggaga ttcctgtggt 150

catgcgtgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200

gcattcagca caacactogn tccaatgtga ttttctacat tgttactctc 250

aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300

aagcatcaga taaaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat coaatgaaacc tttacacctt 400
 gcaaggttct acttgccaat totggttccc agcgcaaaga aggccatata 450
 catggatgat gatgtaattg tgcaaggtga tattottgcc cttacaata 500
 cagcaactgaa gccaggacat gcagctgcat ttccagaaga ttgtgattca 550
 gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173
 <211> 1866
 <212> DNA
 <213> Homo sapiens

<400> 173
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 gcggctgcca cggagctaga gggcaagtgt gctgcggcca gcgtgcaggg 100
 aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
 gctgagctgg cagggcgggt cggggcgcg gctgcatcgc catctcctcc 200
 atcgctcgca gtaaggcgcg ccgcggcgag cctttgaggg gaacgacttg 250
 tcggagccct aaccaggggg gtctctgagc ctgggtggat cccgggagcg 300
 tcacatcact ttccgatcac ttcaaagtgg ttaaaaaacta atatttatat 350
 gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400
 ctgggctgtt gctctcttct tactggtttt gcaccataac ttctcagct 450
 tgaggcagtt tgtaaggaa tgaggttaca gattcaggaa ttgtagggcc 500
 tcaacctata ggactttgtc ccaaagtgc tcgcacatgc agtagatggg 550
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 gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
 tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
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 ttgaccctaa acttttgga gaaaagtaa aggaggtatc tgaccagggg 800
 gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
 ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900
 ggtgatattc ttgoccttta caatacagca ctgaagccag gacatgcagc 950
 tgcattttca gaagatttg attcagcctc tactaaagtt gtcatccgtg 1000
 gaggcaggaa ccagtacaat tacattggct atcttgacta taaaagga 1050
 agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100
 agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
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accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
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 tgtttgggga aaaatgggtat attccagacc caacaggcaa attcaacct 1450
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 tgtaagcaag catttctcag gaagtctctg aagatagcat gcgtgggaag 1550
 taacagttgc taggettcaa tgctatcgg tagcaagcca tggaaaaaga 1600
 tgtgtcagct aggtaaagat gacaaaactgc cctgtctggc agtcagcttc 1650
 ccagacagac tatagactat aaatatgtct ccatctgcct taccaggtgt 1700
 tttcttacta caatgtgtaa tgactggaaa gaagaactga tatggctagt 1750
 tcagctagct ggtacagata attcaaaact gctgttgggt ttaattttgt 1800
 aacctgtggc ctgatctgta aataaaaactt acatttttca ataggtaaaa 1850
 aaaaaaaaa aaaaaa 1866

<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
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 ctcaccattg aggcagctcc actgtctgtg ctggctctgag ggtgctgcct 150
 gtcatggggg cagccatctc ccaggggggc ctcacgcca tegtctgcaa 200
 cggctcgtg ggcttcttgc tgctgtctgt ctgggtcctc ctctgctggg 250
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 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
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 gagccagggc catctggact atgctccatc ccaagggcca agggctcaggg 650
 gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700
 ggggaagcaa ctggaaccca tggcaataat agggagggtgt ccaggctggg 750

ccccccccct ggctctccca gtgtttgctg gataataaat ggaactatgg 800
ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175
<211> 87
<212> PRT
<213> Homo sapiens

<400> 175
Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys
1 5 10 15
Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu
20 25 30
Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45
Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
50 55 60
His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
65 70 75
Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
80 85

<210> 176
<211> 1660
<212> DNA
<213> Homo sapiens

<400> 176
gtttgaattc cttcaactat acccacagtc caaaagcaga ctcaactgtgt 50
cccaggctac cagttcctcc aagcaagtca ttcccttat ttaaccgatg 100
tgtccctcaa acacctgagt gctactccct attgcatct gttttgataa 150
atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200
gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250
gatgtttacc ttcagattca tcaccacct tctggttcac attttcattt 300
cattggttat tttgggattg ttgtttgtct ggggtgtttt atggtggctg 350
tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400
aaatatgaag tgcgtgctg gggttgctat cgtatccaca ggcacacagg 450
cagtgctgct cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500
gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttctt 550
gctgttccag ccaactgtga catttgccat cctcattttt ttctgggtcc 600
tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcccaggtt 650
atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700
gtggtcgctac catttaattg gctcactctg gactagttaa ttcatccttg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850
 tctcttcttc taccatcaag gaaccgttgt gaaagggca tttttaatct 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgtgcta 1000
 ctgtgtttc tgggtgcttg acaaatacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgto caagaactca agtcacttta catctattaa 1150
 ctgctttgga gacttcataa tttttctagg aaaggtgtta gtggtgtgtt 1200
 tcaactgttt tggaggactc atggctttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctggaa acaaatgatg gatcgctaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaatataa 1450
 caatgcaagg gcacagcagg acaagcactc attaaaggaat gaggagggaa 1500
 cagaactcca ggcattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaag ttagtgaatt tttttttaa agacctaaata aaccctattc 1650
 ttctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
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 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

	95	100	105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe
	110	115	120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe
	125	130	135
Trp Val Leu Trp	Val Ala Val Leu Leu Ser	Leu Gly Thr Ala Gly	Leu
	140	145	150
Ala Ala Gln Val	Met Glu Gly Gly Gln Val	Glu Tyr Lys Pro Leu	Leu
	155	160	165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr His	Leu Ile Gly Leu Ile	Ile
	170	175	180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys Gln	Gln Met Thr Ile Ala	Ala
	185	190	195
Gly Ala Val Val	Thr Cys Tyr Phe Asn Arg	Ser Lys Asn Asp Pro	Pro
	200	205	210
Pro Asp His Pro	Ile Leu Ser Ser Leu Ser	Ile Leu Phe Phe Tyr	Tyr
	215	220	225
His Gln Gly Thr	Val Val Lys Gly Ser Phe	Leu Ile Ser Val Val	Val
	230	235	240
Arg Ile Pro Arg	Ile Ile Val Met Tyr Met	Gln Asn Ala Leu Lys	Lys
	245	250	255
Glu Gln Gln His	Gly Ala Leu Ser Arg Tyr	Leu Phe Arg Cys Cys	Cys
	260	265	270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys Tyr	Leu Leu His Leu Asn	Asn
	275	280	285
Gln Asn Ala Tyr	Thr Thr Thr Ala Ile Asn	Gly Thr Asp Phe Cys	Cys
	290	295	300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile Leu	Ser Lys Asn Ser Ser	Ser
	305	310	315
His Phe Thr Ser	Ile Asn Cys Phe Gly Asp	Phe Ile Ile Phe Leu	Leu
	320	325	330
Gly Lys Val Leu	Val Val Cys Phe Thr Val	Phe Gly Gly Leu Met	Met
	335	340	345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln Val	Trp Ala Val Pro Leu	Leu
	350	355	360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu Val	Ala His Ser Phe Leu	Leu
	365	370	375
Ser Val Phe Glu	Thr Val Leu Asp Ala Leu	Phe Leu Cys Phe Ala	Ala
	380	385	390
Val Asp Leu Glu	Thr Asn Asp Gly Ser Ser	Glu Lys Pro Tyr Phe	Phe
	395	400	405
Met Asp Gln Glu	Phe Leu Ser Phe Val Lys	Arg Ser Asn Lys Leu	Leu

	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu					
	425		430		435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg					
	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

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 aagggaaaaa gaattatcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaacaagg gtgtcattct gatatttatg aggactgttg 200
 ttctcactat gaaggcatct gttattgaaa tgttccttgt ttgtctggtg 250
 actggagtag attcaaaca agaaacggca aagaagatta aaaggcccaa 300
 gtctcactgt cctcagatca actgcgatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaga ccccaaatatc 400
 catgtttatg gcactgacgt gtatgcattc tactccagtg tgtgtggcgc 450
 tgccgtacac agtgggtgct ttgataatto aggagggaaa atactgttct 500
 ggaaggttgc tggacagtct ggttacaaa ggagttattc caacggtgtc 550
 caatcgttat ccctaccacg atggagagaa tcctttatcg tcttagaaa 600
 taaacccaaa aagggtgtaa cctaccatc agctcttaca tactcatcat 650
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 aaactgcaaa attgacttgt cgtttttaat tgatggggagc accagcattg 1100
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 agacaaccct gctactcact ttaacctcaa gacacacacg aattctcgag 1250

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 gtaggctggg ccattctcctt tgtgaccaag aacttctttt ccaaagccaa 1350
 tggaaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
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 atcaacattt tcttcatcac cattgaaggt gctgctgaaa atgagaagca 1500
 gtatgtggtg gagcccaact ttgcaaacaa ggccgtgtgc agaacaaacg 1550
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<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

	290		295		300
Ser Thr Ser Ile	Gly 305	Lys Arg Arg Phe	Arg 310	Ile Gln Lys Gln	Leu 315
Leu Ala Asp Val	Ala 320	Gln Ala Leu Asp	Ile 325	Gly Pro Ala Gly	Pro 330
Leu Met Gly Val	Val 335	Gln Tyr Gly Asp	Asn 340	Pro Ala Thr His	Phe 345
Asn Leu Lys Thr	His 350	Thr Asn Ser Arg	Asp 355	Leu Lys Thr Ala	Ile 360
Glu Lys Ile Thr	Gln 365	Arg Gly Gly Leu	Ser 370	Asn Val Gly Arg	Ala 375
Ile Ser Phe Val	Thr 380	Lys Asn Phe Phe	Ser 385	Lys Ala Asn Gly	Asn 390
Arg Ser Gly Ala	Pro 395	Asn Val Val Val	Val 400	Met Val Asp Gly	Trp 405
Pro Thr Asp Lys	Val 410	Glu Glu Ala Ser	Arg 415	Leu Ala Arg Glu	Ser 420
Gly Ile Asn Ile	Phe 425	Phe Ile Thr Ile	Glu 430	Gly Ala Ala Glu	Asn 435
Glu Lys Gln Tyr	Val 440	Val Glu Pro Asn	Phe 445	Ala Asn Lys Ala	Val 450
Cys Arg Thr Asn	Gly 455	Phe Tyr Ser Leu	His 460	Val Gln Ser Trp	Phe 465
Gly Leu His Lys	Thr 470	Leu Gln Pro Leu	Val 475	Lys Arg Val Cys	Asp 480
Thr Asp Arg Leu	Ala 485	Cys Ser Lys Thr	Cys 490	Leu Asn Ser Ala	Asp 495
Ile Gly Phe Val	Ile 500	Asp Gly Ser Ser	Ser 505	Val Gly Thr Gly	Asn 510
Phe Arg Thr Val	Leu 515	Gln Phe Val Thr	Asn 520	Leu Thr Lys Glu	Phe 525
Glu Ile Ser Asp	Thr 530	Asp Thr Arg Ile	Gly 535	Ala Val Gln Tyr	Thr 540
Tyr Glu Gln Arg	Leu 545	Glu Phe Gly Phe	Asp 550	Lys Tyr Ser Ser	Lys 555
Pro Asp Ile Leu	Asn 560	Ala Ile Lys Arg	Val 565	Gly Tyr Trp Ser	Gly 570
Gly Thr Ser Thr	Gly 575	Ala Ala Ile Asn	Phe 580	Ala Leu Glu Gln	Leu 585
Phe Lys Lys Ser	Lys 590	Pro Asn Lys Arg	Lys 595	Leu Met Ile Leu	Ile 600
Thr Asp Gly Arg	Ser 605	Tyr Asp Asp Val	Arg 610	Ile Pro Ala Met	Ala 615

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
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 agatcccgcc cactacagtt ttctctgac tctaattgat gactggaca 200
 ccttgctgat ttggggaat gtctcagaat tccaaagagt ggttgaagt 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctcccag cctttcagac 450
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 gaatttgcca ccctgagcag cctcactggt gaccgggtg tgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccgtca gatatcgggc 650
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 ggaccttctt caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
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 agaccacaag ctggacaacc gcatggagtc gttcttctcg gccgagactg 1250
 tgaaatacct ctacctctcg tttgacccaa ccaacttcac ccacaacaat 1300
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 atcataaaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
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 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly	Val Asn Pro Gly Glu Thr			
	140	145			150
Pro Val Thr Cys	Thr Ala Gly Ile Gly	Thr Phe Ile Val Glu Phe			
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp	Pro Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp	Glu Ser Arg Ser Asp Ile			
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val	Leu Thr Gly Lys Trp Val			
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly	Val Asp Ser Tyr Phe Glu			
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu	Gln Asp Lys Lys Leu Met			
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala	Ile Arg Asn Tyr Thr Arg			
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln	Met Tyr Lys Gly Thr Val			
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu	Ala Tyr Trp Pro Gly Leu			
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn	Ala Met Arg Thr Phe Leu			
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe	Gly Gly Leu Pro Glu Phe			
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val	Glu Lys Arg Glu Gly Tyr			
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser	Ala Met Tyr Leu Tyr Arg			
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu	Leu Gly Arg Asp Ala Val			
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val	Glu Cys Gly Phe Ala Thr			
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu	Asp Asn Arg Met Glu Ser			
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr	Leu Tyr Leu Leu Phe Asp			
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly	Ser Thr Phe Asp Ala Val			
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu	Gly Ala Gly Gly Tyr Ile			
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp	Leu Ala Ala Leu His Cys			

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met		
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys		
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly		
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys		
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro		
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly Gln Val Phe Leu Asp Ser		
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
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 gcttctctgg ccggtctctag aacaattcag gcttcgtctg gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgtttctg gtcaaaactga gtctaccaa 250
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttctatg 300
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
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 gtccaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
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 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctcaggga actcctcagg gcctggatct cataggtttg cggaaaggcc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgagggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgtgt tctacaagtc tagaagcaac catcagaggc aggggtggtt 1350
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 ggctgccact tgctggctga gcaaccttg gaaaagtgc ttcacccctt 1450
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 aaacacacac acacagagtc tctctctata tatacacagc tacacataaa 1550
 tacacccagc acttgcaagg ctagagggaa actgggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtggctg gagagccca tttcccagaa 1700
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 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtcccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccacctgggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu
1 5 10 15

Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp
20 25 30

Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
35 40 45

Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro
50 55 60

Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
65 70 75

Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser
80 85 90

Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala
95 100 105

Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
110 115 120

Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser
125 130 135

Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe
140 145 150

His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe
155 160 165

Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val
170 175 180

Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met
185 190 195

Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
200 205 210

Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu
215 220 225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 cctttctagc ttcttggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctagggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgccctca gaaacctctc gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtoga ataccagggg gagtacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctcaactcaact gaaggctcgt agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaactcaa ccatccttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttaggttcc 700
 ttgtggccta ntggaggagg ggccaacccc ttgcggcgca aggggttngc 750
 gaaccccttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggcgcgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggtgtctcc tgtgggtctgc gccctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcgtcaaca tccggggcaa actggtgtcg 150
ctggagaagt acgcgggac ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aactgtctcg ccttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgcg 350
cacctacagt gtctattcc ccatgtttag caagattgca gtcaccggta 400
ctggtgcccc tctgccttc aagtacctgg ccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaagtggtg 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatcga 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatgggtg cttcaaaggg agagaccac tgactctcct 700
 tctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatac aagcaataat ctcccaccca 900
 aggccttctgt aaactgggac caatgattac ctcatagggc tgttgtagg 950
 attagtagta aatacctgtg aaagtgccta ggcatgtcca gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcataata accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggttta gttgttgta ttctctctgt attattttct tcattacaaa 1150
 agaaatgcga gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taataaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
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 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala 30
 20 25
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly 45
 35 40
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr 60
 50 55
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly 75
 65 70
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly 90
 80 85
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg 105
 95 100
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val 120
 110 115
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr 135
 125 130
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala 150
 140 145
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

155 160 165
 Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile
 170 175 180
 Leu Leu Lys Arg Glu Asp Leu
 185

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 190
 gcaggacttc tacgacttca aggc 24
 <210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 191
 agtctgggcc aggtacttga aggc 24
 <210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 192
 caacatccgg ggcaaaactgg tgtcgtgga gaagtaccgc ggatcgggtg 50
 <210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens
 <400> 193
 cggacgcgtg ggcgggcgg gacgcaggcc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgcggggag ctcggggggtg 100
 ctggggggccc gggccgcctt ctctcgaggt tggcaggaag ccaggttgca 150
 ggggtgtccc ttctcagtt ccagagaggt ggatgcgatg gtctccacgc 200
 ccatcgagg cctcagctac gttcagggtt gcacacaaaa gcatcttaac 250
 agcaagactg tgggccagtg cctggagacc acagcacaga ggggtcccaga 300
 acgagaggcc ttggctgtcc tccatgaaga cgtcagggtg acctttgccc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct ggcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgtctcatg cagttggcca ccgcccaggc gggcatcatt ctggtgtctg 500
 tgaaccacgc ctaccaggct atggaactgg agtatgtcct caagaaggtg 550
 ggctgcaagg cccttgtgtt cccaagcaa ttoaagacc agcaatacta 600
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcat ctcggtggat 700
 gcccttttgc cggggaccct gctcctggat gaagtgggtg cggtggcag 750
 cacacggcag catctggacc agtccaata caaccagcag ttctgtcct 800
 gccatgacct catcaacatc agttcacct cggggacaac aggcagcccc 850
 aagggggcca ccctctccca ctacaacatt gtcaacaact coaacatttt 900
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
 tcctgcccaa cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000
 atgtgtctga tgtacggtgc caccctcatc ctggcctctc ccatcttcaa 1050
 tggcaagaag gcaactggag ccatcagcag agagagaggc acctctctgt 1100
 atggtacccc cacgatgttc gtggacatcc tgaaccagcc agactttccc 1150
 agttatgaca tctcgacct gtgtggaggt gtcattgtcg ggtcccctgc 1200
 acctocagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
 tgggtggttc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300
 ttccctgagg acaactgtga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gaggcccgga tcatgaacat ggaggcaggg acgctggcaa 1400
 agctgaacac gcccggggag ctgtgcatcc gagggtaact cgtcatgctg 1450
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500
 gtggtatttg acaggagatg tcgccacaat gaatgagcag ggcttctgca 1550
 agatcgtggg ccgctctaag gatattgatc tccgggggtg tgagaacatc 1600
 taccoccgag agctcgagga cttctttcac acacaccga aggtgcagga 1650
 agtgacagtg gtgggagtgaggacgatcg gatgggggaa gagattttgtg 1700
 cctgcattcg gctgaaggac ggggaggaga ccacggtgga ggagataaaa 1750
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800
 gttttgcaca aactaccccc tcaccatttc aggaaagatc cagaaattca 1850
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggtggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctagatgtcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactcgccgt ggcacaaggt gccaaaaggc aggcagcctg cccaggccct 2100
ccctcctgtg catecccccac attcccctgt ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaa 2187

<210> 194
<211> 615
<212> PRT
<213> Homo sapiens

<400> 194
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Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
20 25 30
Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
35 40 45
Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
50 55 60
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
65 70 75
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
80 85 90
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
95 100 105
Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
110 115 120
Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
125 130 135
Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
140 145 150
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
155 160 165
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
170 175 180
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
185 190 195
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
200 205 210
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
215 220 225
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
230 235 240
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser Pro		
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn		
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln		
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser		
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile		
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile		
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr Gly Thr Pro Thr Met Phe		
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe Ser Ser Tyr Asp Ile Ser		
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly Ser Pro Ala Pro Pro Glu		
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile Asn Met Lys Asp Leu Val		
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser Pro Val Thr Phe Ala His		
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys Ala Glu Ser Val Gly Arg		
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile Met Asn Met Glu Ala Gly		
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly Glu Leu Cys Ile Arg Gly		
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly Glu Pro Gln Lys Thr Glu		
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr Trp Thr Gly Asp Val Ala		
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys Ile Val Gly Arg Ser Lys		
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn Ile Tyr Pro Ala Glu Leu		
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys Val Gln Glu Val Gln Val		
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly Glu Glu Ile Cys Ala Cys		
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr Thr Val Glu Glu Ile Lys		

560	565	570
Ala Phe Cys Lys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgccctgaa actgcatgag aagacaccag 50
 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccgaact totccagtta tgacatctcg accatgtgtg gaggtgtcat 300
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 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcgcatcatg aacatggagg 500
 cagggaagct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
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 aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgtctc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggcgtgg acgtctgcac 200
 cgaggccgtg ggggcggtgg agaccatcca cggacaatc tgcgtggcag 250
 tgcgggggtg cggttcggga ctccccggca agaataccg cggcctggat 300
 ctccacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac cggcaggta 400
 atgagagtgc ataccgcccc aacggcgtgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgcca gggtagatcg ccgcccgtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggctg ctctgacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcactcggga tggagtaaca ggcccagggc tcacgctcag 650
 tggctctctg tgccaggggt cccgctgtaa ctctgacctc ogcaacaaga 700
 cctacttctc cctcgaatc ccaccccttg tccggctgcc cctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800
 agtgagaccc acatccacca ccaaaccat gccagcgcca accagtca 850
 ctccgagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900
 ttgactggag gcgcccgtgg ccaccaggac cgcagcaatt caggggcagta 950
 tctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgctta 1050
 ctgtgagctt ctccacctgg aaatttccct ctacactact tctctggccc 1100
 tgggtacccc tcttctcctc acttctgttt cccaccactg gactgggctg 1150
 gccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgtcta gctttttgag gacagctcct gtatccttct catccttctc 1300
 tctccgcttg tctccttggt atgttaggac agagtggagc aagtgcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgctccccc actccccgca tctttgggga atcggttccc 1500
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5				10					15

Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala
				20					25					30

Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

[illegible]

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

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 gtccctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttgcct gtggtcctct 200
 tctcggtttg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcaggtag aagcctcttg aacctgaggc ggctgcttga acctttggat 400
 gcaaatgtcg atgcttaaga aaaccggcca ctccagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
 cattctccca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaaactgt gtcttttggt ctacttggtt gtggatggta 650
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 cacatggcca tctgtctctc cctgcccccg tggccctcca tcacctctg 750
 ctctaggag gctgcttggt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtag tcttcagtcg tcttgggacc 850
 tgggaagggt tgcaagactt tgtcatcatt cttoatggac tcctttcact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
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 caggccccagg gcttctactc tgcccctggg gaatgtgtcc cctgcatac 1150
 ttctcagcaa taactccatg ggctctggga cctacacctt tccaaccttc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctggt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccct tagatgggca gcagaggcaa ctccgcctc 1400

ctttgctctg cctgtcggtg gtcagagcgg tgagcgaggt gggttgaga 1450
ctcagcaggc tccgtgcagc ccttgggaac agtgagaggt tgaaggcat 1500
aacgagagtg ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550
cccgcggaac ccaacaaac cgtgcgctgt gaccattgc tgttctctgt 1600
atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650
gtttctt 1657

<210> 199
<211> 120
<212> PRT
<213> Homo sapiens

<400> 199
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met
1 5 10 15
Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
20 25 30
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
35 40 45
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
50 55 60
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
65 70 75
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
80 85 90
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
95 100 105
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
110 115 120

<210> 200
<211> 415
<212> DNA
<213> Homo sapiens

<400> 200
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aagaagcac cattgagaat tatgcgtcac gacccgaggc ctttaacacc 150
ccgttctcga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
cctgaactgg cagccctctc ttgagtctat caaaaggaaa cttcctttcc 250
tcaactggga tgcccttccct aagctgaaag gactgaggag cgcaactcct 300
gatgcccaat gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
tgattctcaa cctaccataa ctctttctcg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggtggagatt gcctttgcct cagtattctt cacctgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150
acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgccaagttt tatgaggctt taggggaatg 300
tcaaccctca aatttttggt atactagatg gcttcattt acccaccact 350
attttaaggt ccctttatatt ttaggttcaa ggttcatttg acttgagaaa 400
gtgcctctct gcagcttcat tgattttggt tatcttcaact attaatgtga 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttagttagtg atcccacaaa tgtgattgtt 550
aatttaaatg ttattctaat attagtacat tcagttgtga tgtaatatga 600
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650
attgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
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 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcoata gaagaggatc taactccttt ccgaggaggc atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggaccoc ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgttc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaaat gatcgggcgt ctccctgaca 400
 tggagatggg gatcaatgta cgagattatc ctccaggttc taaatggatg 450
 gagcctgccca tcccagtcct ctccctcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttggc cattttggga agggggaccc gctgtttggc 550
 caatttatcc tacaggctct ggacggtggg acctcttcag agaagatctg 600
 gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaaac agatcctctc attctctgtg 700
 ctccgaaaaa cccaaaaact gtgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgggatg cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850
 ctgcaagttt ccggttataa cactctcttc tgtgtggctc actgttttcc 900
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atcccagtc aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aataactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct cttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggtcct atacctgaa 1300
 tatctgtctat caagccaaat acctggtttt ctttatcatg ctgcacccag 1350
 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaaccacac tctaccttct attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg cctttgttcc cattatttgg agcagaaaaa tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca agcggtgatc 1650
 tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700
 cttggggatc attctctgaa tgggtctaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcata gtaattattg 1850
 caattggatt tcagggtccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390

Glu Leu

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
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 tttaoctccc ttccggcoact tcttgagggg atcccgaggt ctggtggtcc 150
 ggatgccegc cagggatggc tggctgcctc gcaggacgc agcatccttg 200
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
 agcctcatgg cagctgaaaag agtgaaggca tggacatccc ggtactttgg 300
 ggtccttcag aggtcactgt atgtggcctg cactgcccctg gcocttgacg 350
 tgggtgatgcg gtactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cacotgggtg ccgctcctct gctttgtgct 450
 ccatgtcatc tctcggctcc tcatcttttag catccttctc gtctttgact 500
 atgctgagct catgggcctc aaacagggtat actaccatgt gctggggctg 550
 ggcgagcctc tggccctgaa gtctccccgg gctctcagac tcttctccca 600
 cctgcgcac ccagtggtg tggagctgct gacagtgctg tgggtggtgc 650
 ctaccctggg caccgaccgt ctctccttg ctttctctct taccctctac 700
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 ccagctcaa agaaaactcc acctgctctc tcggccccag gatggggagg 800
 cagagtgagg agctcactct ggttacaagc cctgtttctc ctctccact 850
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 caaatccatg gactgaagga gatgcccctt ctactacttg agactttatt 950
 ctctgggtgc agctccatac cctaaattct gagtttcaag cactgaactc 1000
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 aaggaaagga tctgcctga caactccctt ggcactgtta cttgcctctg 1150
 cgcctcaggg gtccccttct gcaccgctgg cttccactcc aagaagggtg 1200
 accagggtct gcaagttoaa cggtcatagc tgtccctcca ggcaccaacc 1250
 ttgcctcacc actccgggc ctagtctctg cactcctta ggcctgct 1300
 ctgggctcag accccaacct agtcaagggg attctcctg tcttaactcg 1350
 atgacttggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

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caacaaaaaa cttaagcttt aatttcattc ggaattccac agttttctta 200
gtccctctga cccggttgac ctgttggtgc ttcccgctgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaagaagc ctccggtctg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcaactgagat ccctcaaatg gagcctctcg ctgctgtcac 400
tcttgagttt ctttgtgatg tggtagctca gccttcccca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt caattcacac ttcgagagca ttcaaatgac tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
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tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac acccttctta tggtagacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaaccaa 800
tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcattcaata ctggcaattt agtgaagtat 900
cttttaaaac taaaccactc agagaagttt ttcacagggt atcctctaata 950
tgataattat tctatagag gattttaacca aaaaaccaa atttcttacc 1000
aggagtatcc ttcaagggtg ttccctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggg gcccaaggatc tatgaaatga tgggtcacgt 1100
aaaaccatc aagtttgaag atgtttatgt cgggactctg ttgaatttat 1150
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
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ataccttggt gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatattgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcaactaggct gtaaaaacaa 1650
 aacaatgtag agttttattt attgaacaat gtatgcactt gaagggtttg 1700
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
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 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgtttttta atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
1				5					10					15

Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
			20						25					30

Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
			35						40					45

Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
			50						55					60

Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
			65						70					75

Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
			80						85					90

Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys
			95						100					105

Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
			110						115					120

Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
			125						130					135

Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
			140						145					150

Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
			155						160					165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
 170 175
 Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
 185 190 195
 Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
 200 205 210
 Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
 215 220 225
 Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
 230 235 240
 Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
 245 250 255
 Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
 260 265 270
 Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
 275 280 285
 Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
 290 295 300
 Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
 305 310 315
 Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
 320 325 330
 Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
 gctggagcttc ttggagtctt tctagctcct gccctagcta actataatat 100
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
 actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300
 tgcctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
 ggtaaggagc caggaggacc acctcccaag ggcctgatgt actcagtcac 400
 cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaacaa 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtggtt tttaccatgt cattctgaaa tttttctcta ctagttagt 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
1 5 10 15
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
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170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
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 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
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aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
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<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagttt 150

ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200

tcgcataatg tcttagtatt aaattnttat tgcttactga tttttttgag 250

ttaaaggttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300

agaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350

agaactgggt tgtttacatg caagcttata gttgaaatat tttcaggaa 400

ttacatgaat gacagtcttc gaaccaatgt gttgttcga tttcaaccag 450

agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500

ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550

ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600

agccaaacta tgaattactg gaaaaagaag tagaaaaag aaaagtagcc 650

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agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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ccaccctcat gcacaggctg gcgcccaact gctccttcgc gcgctggctg 150

ctctgtaacg gcagtttgtt ccgatacaag caccctgtctg aggaggagct 200

tcgggcccctg gcggggaagc cgaggcccoag aggcaggaaa gagcggtggg 250

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<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

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			20						25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
			35						40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
			50						55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
			65						70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
			80						85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
			95						100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
			110						115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
			125						130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
			140						145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
			155						160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
			170						175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
			185						190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
			200						205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
			215						220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
			230						235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
			245						250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
			260						265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
			275						280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

	290		295		300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg			
	305	310			315
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr			
	320	325			330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val			
	335	340			345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile			
	350	355			360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser			
	365	370			375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu			
	380	385			390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala			
	395	400			405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile			
	410	415			420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala			
	425	430			435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val			
	440	445			450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala			
	455	460			465
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser			
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<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
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 gctggtgct ctgtaacggc agtttgttcc gatacaagca cccgtnttg 150
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<210> 218
 <211> 2571
 <212> DNA
 <213> Homo sapiens

<400> 218
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 cacactgctc ggagaatgaa ggcgcttctg ttgctggctt tgccttggtt 250
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 cagaactctg taaagggtgcc tcccactacg gcctgaccaa agataggaag 350
 aggcgctcac aagatggctg tccagacggc tgtgcgagcc tcacagccac 400
 ggctccctcc ccagaggttt ctgcagctgc caccatctcc ttaatgcag 450
 acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500
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aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

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Leu Cys Lys Gly	Ala Ser His Tyr Gly Leu Thr Lys Asp Arg Lys		
	35	40	45
Arg Arg Ser Gln Asp	Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr		
	50	55	60
Ala Thr Ala Pro Ser	Pro Glu Val Ser Ala Ala Ala Thr Ile Ser		
	65	70	75
Leu Met Thr Asp Glu	Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser		
	80	85	90
Ser Ala Glu Asp Gly	Gln Pro Ala Ile Ser Pro Val Asp Ser Gly		
	95	100	105
Arg Ser Asn Arg Thr	Arg Ala Arg Pro Phe Glu Arg Ser Thr Ile		
	110	115	120
Arg Ser Arg Ser Phe	Lys Lys Ile Asn Arg Ala Leu Ser Val Leu		
	125	130	135
Arg Arg Thr Lys Ser	Gly Ser Ala Val Ala Asn His Ala Asp Gln		
	140	145	150
Gly Arg Glu Asn Ser	Glu Asn Thr Thr Ala Pro Glu Val Phe Pro		
	155	160	165
Arg Leu Tyr His Leu	Ile Pro Asp Gly Glu Ile Thr Ser Ile Lys		
	170	175	180
Ile Asn Arg Val Asp	Pro Ser Glu Ser Leu Ser Ile Arg Leu Val		
	185	190	195
Gly Gly Ser Glu Thr	Pro Leu Val His Ile Ile Ile Gln His Ile		
	200	205	210
Tyr Arg Asp Gly Val	Ile Ala Arg Asp Gly Arg Leu Leu Pro Gly		
	215	220	225
Asp Ile Ile Leu Lys	Val Asn Gly Met Asp Ile Ser Asn Val Pro		
	230	235	240
His Asn Tyr Ala Val	Arg Leu Leu Arg Gln Pro Cys Gln Val Leu		
	245	250	255
Trp Leu Thr Val Met	Arg Glu Gln Lys Phe Arg Ser Arg Asn Asn		
	260	265	270
Gly Gln Ala Pro Asp	Ala Tyr Arg Pro Arg Asp Asp Ser Phe His		
	275	280	285
Val Ile Leu Asn Lys	Ser Ser Pro Glu Glu Gln Leu Gly Ile Lys		
	290	295	300
Leu Val Arg Lys Val	Asp Glu Pro Gly Val Phe Ile Phe Asn Val		
	305	310	315
Leu Asp Gly Gly Val	Ala Tyr Arg His Gly Gln Leu Glu Glu Asn		

320	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser
335		340
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val
350		355
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile
365		370
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly
380		385
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile
395		400
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu
410		415
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp
425		430
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile
440		445
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val
455		460
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala
470		475
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu
485		490
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala
500		505
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro
515		520
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys
530		535
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe
545		550
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe
560		565
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly
575		580
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser
590		595
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu
605		610
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr
620		625
Phe Leu		630

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatacgccc aagcaacaat ggtggcaatg ttcaggagag 200
 agtgacaatt gataatgaaa aaaatacogc catcgtaaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc totcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgtttctc aacaaatata cctgggtcaa gtacaaccct 450
 ctggagtctc tgatcaaaga cgtggattgg ttctgtcttg ggtcaccat 500
 tgagaaactc tgcaaacata tccttttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcgtgct ggaggtctgtg caaaggctgg gctcctgggc 600
 atcttgggaa ttccaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaatataa ttctttccca atgcccacac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln
 95 100 105
 Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr
 110 115 120
 Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu
 125 130 135
 Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys
 140 145 150
 Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys
 155 160 165
 Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala
 170 175 180
 Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
 ggcacgagcc aggaactagg aggttctcac tgcccagagca gaggcctac 50
 acccaccgag gcatggggct ccttgggctg ttctgcttg ccgtgctggc 100
 tgccagcagc ttctccaagg cacgggagga agaaaattacc cctgtggtct 150
 ccattgccta caaagtcctg gaagttttcc ccaaaggccg ctgggtgctc 200
 ataacttgct gtgcaccca gccaccaccg cccatcacct attccctctg 250
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
 cggcctcctt caacctcaac gtcacactca agtcacgtcc agacctgctc 350
 acctacttct gccgggctgc ctccacctca ggtgcccatg tggacagtgc 400
 caggtacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
 atctgccagg cgtctcggg cagcccacct atcaccaaca gcctgatcgg 550
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc ctctctgcg agccagacat cggactggtt ctggtgccag 650
 gctgcaaaa acgccaatgt ccagcacagc gccctcacag tgggtccccc 700
 aggtggtgac cagaagatgg aggactggca ggggtcccctg gagagcccca 750
 tccttgccct gccgctctac aggagcacco gccgtctgag tgaagaggag 800
 tttggggggg tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggg gttcattgcaa aatgagtgtg 950
 ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223
 <211> 265
 <212> PRT
 <213> Homo sapiens

<400> 223
 Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
 1 5 10 15
 Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser
 20 25 30
 Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
 35 40 45
 Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Pro Ile Thr Tyr
 50 55 60
 Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
 65 70 75
 Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
 80 85 90
 Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
 95 100 105
 Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
 110 115 120
 Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
 125 130 135
 Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
 140 145 150
 Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
 155 160 165
 Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
 170 175 180
 Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
 185 190 195
 Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
 200 205 210
 Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
 215 220 225
 Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
 230 235 240
 Arg Leu Ser Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
 245 250 255
 Glu Val Arg Gly Arg Lys Ala Ala Ala Met
 260 265

<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
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 cttctgctcc tgctgtccgg ctggtcccg gctgggagag ccgaccctca 100
 ctctcttttc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
 ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttactat 200
 gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
 aaatgtcaca acggcctgga aagcacagaa ccagtgactg agagaggtgg 300
 tggacatact tacagagcaa ctgcgtgaca ttacagctgga gaattacaca 350
 cccaaggaac ccctcacctc gcaggcaagg atgtcttggt agcagaaagc 400
 tgaagacac agcagtgatg ctggcagtt cagtttcgat ggcagatctc 450
 tcctcctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500
 gccagaaaag tgaagaaaaa gtggggagaat gacaagggtg tggccatgtc 550
 ctccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
 tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
 atgtcctcag gcacaacca actcagggcc acagccacca cctcatcct 700
 ttgctgctc ctcacatcc tcccctgctt catcctccct ggcactctgag 750
 gagagtcctt tagagtgaca ggttaagct gatacaaaa ggctcctgtg 800
 agcacggtct tgatcaaac cgccttctg tctggccagc tgcccacgac 850
 ctacggtgta gtccagtg cctccagcag atcatgatga catcatggac 900
 ccaatagctc attcactgcc ttgattcctt ttgccaacaa tttaccagc 950
 agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
 ttctgtcact taaagttctg gctgactaaa caagatatat cattttctt 1050
 cttctctttt tgtttgaaa atcaagtact tctttgaatg atgatctctt 1100
 tcttgcaaat gatattgtca gtaaaataat cactgtagac ttcagacctc 1150
 tggggattct ttccgtgtcc tgaagagaa ttttaaat atttaataag 1200
 aaaaaattta tattaatgat tgtttcctt agtaatttat tgttctgtac 1250
 tgatatttaa ataaagatt ctatttccca aaaaaaaaa aaaaaa 1297

<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
1 5 10 15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20 25 30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35 40 45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50 55 60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65 70 75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80 85 90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95 100 105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110 115 120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125 130 135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140 145 150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155 160 165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170 175 180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185 190 195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200 205 210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230 235 240
Phe Ile Leu Pro Gly Ile
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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tgctgctagc tgccttgggc ctcaaatatt tcattctgtt ttctgacttt 100
caagttatat accgtggaat ggagttgata ccaaccataa catcgtggag 150

gggttttaatt ttggtggtag ccctcaccoca attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttggtat totactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcagggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggg caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgtga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatatatt tcaatgaatt 600
 aaaccttgca gcaaggggacc ttatgataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
 cacaccatga agctcttggg gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcccctcc 200
 gtttgcctgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250
 cctctccgag gtcccgcagg gtattccctc gaacaccggg taacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcato cctagcgggg cctttgaata cctgtccaag 500
 ctgcggggagc tctggcttcg caacaacccc atcgaaagca tcccccttta 550
 cgccctcaac cgggtgccct cctcatgctg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 cccctcggtg gggctggagg agctggagat gtcagggaac cacttccctg 750
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 gtcatgaact cacaggtcag cctgattgag cggaaatgctt ttgacgggct 850
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aaacttcgta agcggcacca gcagcggagt acagtcacag cgcgccggac 1750
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 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccaatatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
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 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

					185						190					195	
Phe	Asn	Leu	Lys	Tyr	200	Leu	Asn	Leu	Gly	Met	205	Cys	Asn	Ile	Lys	Asp	210
Met	Pro	Asn	Leu	Thr	215	Pro	Leu	Val	Gly	Leu	220	Glu	Glu	Leu	Glu	Met	225
Ser	Gly	Asn	His	Phe	230	Pro	Glu	Ile	Arg	Pro	235	Gly	Ser	Phe	His	Gly	240
Leu	Ser	Ser	Leu	Lys	245	Lys	Leu	Trp	Val	Met	250	Asn	Ser	Gln	Val	Ser	255
Leu	Ile	Glu	Arg	Asn	260	Ala	Phe	Asp	Gly	Leu	265	Ala	Ser	Leu	Val	Glu	270
Leu	Asn	Leu	Ala	His	275	Asn	Asn	Leu	Ser	Ser	280	Leu	Pro	His	Asp	Leu	285
Phe	Thr	Pro	Leu	Arg	290	Tyr	Leu	Val	Glu	Leu	295	His	Leu	His	His	Asn	300
Pro	Trp	Asn	Cys	Asp	305	Cys	Asp	Ile	Leu	Trp	310	Leu	Ala	Trp	Trp	Leu	315
Arg	Glu	Tyr	Ile	Pro	320	Thr	Asn	Ser	Thr	Cys	325	Cys	Gly	Arg	Cys	His	330
Ala	Pro	Met	His	Met	335	Arg	Gly	Arg	Tyr	Leu	340	Val	Glu	Val	Asp	Gln	345
Ala	Ser	Phe	Gln	Cys	350	Ser	Ala	Pro	Phe	Ile	355	Met	Asp	Ala	Pro	Arg	360
Asp	Leu	Asn	Ile	Ser	365	Glu	Gly	Arg	Met	Ala	370	Glu	Leu	Lys	Cys	Arg	375
Thr	Pro	Pro	Met	Ser	380	Ser	Val	Lys	Trp	Leu	385	Leu	Pro	Asn	Gly	Thr	390
Val	Leu	Ser	His	Ala	395	Ser	Arg	His	Pro	Arg	400	Ile	Ser	Val	Leu	Asn	405
Asp	Gly	Thr	Leu	Asn	410	Phe	Ser	His	Val	Leu	415	Leu	Ser	Asp	Thr	Gly	420
Val	Tyr	Thr	Cys	Met	425	Val	Thr	Asn	Val	Ala	430	Gly	Asn	Ser	Asn	Ala	435
Ser	Ala	Tyr	Leu	Asn	440	Val	Ser	Thr	Ala	Glu	445	Leu	Asn	Thr	Ser	Asn	450
Tyr	Ser	Phe	Phe	Thr	455	Thr	Val	Thr	Val	Glu	460	Thr	Thr	Glu	Ile	Ser	465
Pro	Glu	Asp	Thr	Thr	470	Arg	Lys	Tyr	Lys	Pro	475	Val	Pro	Thr	Thr	Ser	480
Thr	Gly	Tyr	Gln	Pro	485	Ala	Tyr	Thr	Thr	Ser	490	Thr	Thr	Val	Leu	Ile	495
Gln	Thr	Thr	Arg	Val		Pro	Lys	Gln	Val	Ala		Val	Pro	Ala	Thr	Asp	

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 gaagaaagaa actgctcaga ccctgggggc ccagtaaatg ggtaccagaa 900
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 cataaaagcc tgccgagaac caaagatttc agacctgggt agaaggagag 1100
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 ctgacatcgc catctgaag ctcttagaca aggcccgatc cagcaccocga 1750
 gtccagccca tctgctcgc tgccagtcgg gatctcagca ctctctcca 1800
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 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
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Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp
				170					175					180
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile
				185					190					195
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile
				200					205					210
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn
				215					220					225
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser
				230					235					240
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala
				245					250					255
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg
				260					265					270
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly
				275					280					285
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile
				290					295					300
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys
				305					310					315
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln
				320					325					330
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala
				335					340					345
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu
				350					355					360
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr
				365					370					375
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys
				380					385					390
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His
				395					400					405
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg
				410					415					420
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp
				425					430					435
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu
				440					445					450
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln
				455					460					465
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu
				470					475					480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	485	490	495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser		530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttgctga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgccaaggac gcaactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgccctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200
ggggccaccg taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagttca tggctaattt coataagacc ctcatcttgg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat ttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttec tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacotgg taccgagaa tgactttaac ctttacaagt gtgaggagca 750
tcccaagcat ctgggtggtg gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
aaggtaaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agctccaaag aatgaaaatt tcccgcccc 950
tgccctgaagt gggtaaatat acaatgtgtc tocacactag agacaaagcg 1000

aatgagggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100
 aacacaaatcc tttatatato aacatcacag tggattttctg gtttgggtgca 1150
 tgaccttgga tcttttgggtg atgtttggaa gaactgattc tttgtttgca 1200
 ataattttgg cctagagact tcaaataagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga attttccctt tttgtatttt cttagcagag 1300
 ctctctgtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
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 ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
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 cgtccaaggt agaaaggtag gaagatacaa tactgttatt catttattct 1600
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 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236

<211> 344

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-27

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 4-7, 220-223, 335-338

<223> N-glycosylation sites

<220>

<221> Xylose isomerase proteins

<222> 191-201

<223> Xylose isomerase proteins

<400> 236

Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu

1

5

10

15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Ly's	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggctgcc atcctcgctc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
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gcgcagatgc toagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgctc cgggcccgcg aatggcccag gcagtggtgt cgcgcctcgg 150
ccgcacatcc tggttgctc gctcctgcgc ctgggccccg gcaggggtgg 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg ccgctgacg cccacctcta ccgcttcacc tggatccaca 350
ccccgctggt gcttactggc aagatggaga aggtctctcg ctccaccatc 400
cgtgtgtgtg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggg ttgtgtgtcc 500
tccccatcac agagttctc gtgggggacc ttgtgtcac ccagaacact 550

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acagctggga	cttcggggac	gggacccaga	tggtgactga	agactccgtg	700
gtctattata	actattccat	catcggggacc	ttcaccgtga	agctcaaagt	750
ggtggcggag	tgggaagagg	tggagccgga	tgccacgagg	gctgtgaagc	800
agaagaccgg	ggactttctc	gcctcgtcta	agctgcaggga	aacctcttga	850
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accacaagat	ccagggtgtg	ccctccagaa	tccagccggc	tgtcttttgt	1150
ttccatgtg	ctacacttat	caactgtgat	ttggccttca	tcatgtacat	1200
gacctctggg	aatgccactc	agcaaaagga	catggtggag	aacctgggagc	1250
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gtctccgcc	ctctataagt	ctgtcaaaa	ttacaccgtg	tgagcactcc	1400
ccctccccc	cccatctcag	tgttaactga	ctgtgactt	ggagtttcca	1450
gcagggtggt	gtgcaccact	gaccaggagg	ggttcatttg	cgtggggctg	1500
ttggcctgga	tcatccatcc	atctgtacag	ttcagccact	gccacaagcc	1550
ctctctctc	gtcacccct	gacccagcc	attcacccat	ctgtacagtc	1600
cagccactga	cataagcccc	actcggttac	caccccttg	acccccatcc	1650
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ctctagtgtg	ggcctggctg	cccactgcc	attctctcca	tattggcaca	1750
tctgtgtcc	attgggggtt	ctcagtttcc	tcocccagac	agccctacct	1800
gtgccagaga	gctagaagaa	aggtcataaa	gggttaaaaa	tcataacta	1850
aaggttgtac	acatagatgg	gcacactcac	agagagaagt	gtgcatgtac	1900
acacaccaca	cacacacaca	cacacacaca	cacagaaata	taaacacatg	1950
cgtcacatgg	gcatttcaga	tgatcagctc	tgtatctggt	taagtctggt	2000
gctgggatgc	acctctcact	agagctgaaa	ggaaatttga	ccccaagca	2050
gccctgacag	gttctgggcc	cgggccctcc	ctttgtgctt	tgtctctgca	2100
gttcttaccc	cctttataag	gcaatccctg	tcctctctgg	ctggcagggg	2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
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 aaaaaaatac aaaaagttag cccggcgtgg tgggtgggtg ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gottgcagtg agcccagatg gcgccactgc actccagcct gagtgcagaga 2550
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 242
 catttccctta ccctggaccc agctcc 26

<210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgacccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcaactga 50
gctcccagat ctggggcgct tgctctctgc tcctctctct cctcgccagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaacccag gacagagctg gagccaggcg cagctggatg cccatgttcc 200
agaggcgaag gagcgagac acccacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg cccccgtccc ctcccttcct tatttattec tgctgoccca 350
gaacataggt ctggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctgcatct tccaccatgt tcctgttgct gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcacct 150
ccttctcgtt ttcacatag tgccagccat ttttggaagc tcctttggta 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc ttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caacactcca 400
gagttcagc tctctgacat tttctacttt tgccggaagc gaatggagac 450
cattatggat gatgaggta caaagagatt ctgagcagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttcacgta catcagcctt 550
cggctcacgc tcctgtgggg gttaggagtg ctgattcgtt actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtag 650
tgggcacaa tgtggtggga tacttgccaa atgggaggtt taaggaattc 700
atgagtaaac atgttcaact aatgtgttac cggatctgcg tgcgagcgct 750
gacagccatc atcacctacc atgacagga aaacagacca agaaatgggtg 800
gcatctgtgt ggccaatcat acctcacga togatgtgat catcttggcc 850
agcgtatggc attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gctatcctc atcttcccag aaggaaacctg 1050
catcaataat acatcggtga tgatgttcaa aaaggggaagt ttgaaattg 1100
gagccacagt ttaccctgtt gctatcaagt atgacctca atttggcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagc tgggcccattg tctgcagcgt gtggtacctc cctcccatga 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagaggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctccctgagcc 1450
 tgccctcagc tgctgtgggc caccgtgcgg ggtgccaacg ggctcagagc 1500
 tggagtgccc gccgccccc ccaactgctgt gtcctttcca gactccaggg 1550
 ctccccgggc tgctotggat ccaggaactc cggctttcgc cgagccgcag 1600
 cgggatccct gtgcaccgcg cgcagcotac ccttggtggt ctaaacggat 1650
 gctgctgggt gttgcgaccc aggcagagat gccttgtttc tttacaata 1700
 agtcgttgga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
 gcgggctgag tgggtgggga gatgtggcca tggctctgtg cttagagatg 1800
 cgggtacaaga gtctgttatg caagcccggtg tgcaggagat gtgctggggg 1850
 cggccaccgc ctctccagga aaggcacagc tgaggcactg tggctgggctt 1900
 cggcctcaac atcgccccc gccctggagc tctgcagaca tgataggag 1950
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgctgct gatgggggta ctaaaggag ggaagaggc cagggtgggcc 2050
 gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
 aactcccat gtgatgcgcg cttgtgtgaa tgtgtgtctc gggtttcccca 2150
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgtc ggggtgagtg gaaggacaca tcacgttcag 2250
 tgtttcaagt acagggccac aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggctttgg atttggtctt gtgagtaaat aaaactggct 2350
 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	
				80						85				90	
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	
				95					100					105	
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	
				110					115					120	
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	
				125					130					135	
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	
				140					145					150	
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	
				155					160					165	
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	
				170					175					180	
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	
				185					190					195	
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	
				200					205					210	
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	
				215					220					225	
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	
				230					235					240	
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	
				245					250					255	
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	
				260					265					270	
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	
				275					280					285	
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	
				290					295					300	
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	
				305					310					315	
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	
				320					325					330	
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	
				335					340					345	
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	
				350					355					360	
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	
				365					370					375	
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	
				380					385					390	

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg
 395 400
 Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu
 410 415 420
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys
 425 430 435
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His
 440 445 450
 Lys Asp Arg Ser Arg Ser
 455

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
 gccctctcgaa accaggactc cagcacctct ggtcccgccc tcaccgggac 50
 ccctggccct cactgtctct ccagggtatg cgctggcggc ttgatgatc 100
 gccctcgcca gctctggcct ccacacctgg caggcccagg ctgttccacc 150
 catctgtccc ctgggcctgg ctccagacac ctttgacgat acctatgtg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccttctc gcgggaatcc tgggaggcag ccaggaggac 300
 ctgggaggag aagcgtcgag ggcttacctt gccccctggc ttcaaagccc 350
 agaatggaat agcattatg gtctacacca actcatogaa caccttgtac 400
 tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450
 catgaggcac ttcccttca aggccttgca tttctacctg atccggggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtctctg gccctggag agttccagct ctccagggtt gggccctgaa 800
 agtccaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttgacct ggggaggcca 950
 cagcaggggt gagggaactc tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacgggtgt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100
gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu	1	5	10	15
His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	20	25	30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	35	40	45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	50	55	60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	65	70	75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	80	85	90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	95	100	105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	110	115	120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	125	130	135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	140	145	150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	155	160	165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	170	175	180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	185	190	195	
Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu	200	205	210	
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr	215	220	225	
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro	230	235	240	

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
gtggcttcac ttacgtggct gacttccaga gagcaatatg gctggttccc 50
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100
gcctctggac ccgtgaaaga gctggtcggg tccgttggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac cctctctgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatat ggagagagta gacttccacg atggaggcta 300
ctccctgaag ctacgcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccaccca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtccaca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500
atggggaaga ggaatgtgatt tatccctgga agggcctggg gcaagcagcc 550
aatgagtgcc ataattgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct cgttgccag gaacctgtc agcagaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtg tgctgatgac 700
ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgct 750
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850
cctaacatat gcccccattc tggagagaac acagagtacg acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atcccactc actgctcacg 1000
atgccagaca caccaaggct atttgcttat gagaatgtta tctagacagc 1050
agtgcactcc cctaagctct tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	
	20	25	30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	
	35	40	45
Lys Gln Val Asp	Ser Ile Val Trp Thr Phe	Asn Thr Thr Pro Leu	
	50	55	60
Val Thr Ile Gln	Pro Glu Gly Gly Thr Ile	Ile Val Thr Gln Asn	
	65	70	75
Arg Asn Arg Glu	Arg Val Asp Phe Pro Asp	Gly Gly Tyr Ser Leu	
	80	85	90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	
	95	100	105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln Pro	Ser Thr Gln Glu Tyr	
	110	115	120
Val Leu His Val	Tyr Glu His Leu Ser Lys	Pro Lys Val Thr Met	
	125	130	135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr Cys	Val Thr Asn Leu Thr	
	140	145	150
Cys Cys Met Glu	His Gly Glu Glu Asp Val	Ile Tyr Thr Trp Lys	
	155	160	165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser His	Asn Gly Ser Ile Leu	
	170	175	180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser Asp	Met Thr Phe Ile Cys	
	185	190	195
Val Ala Arg Asn	Pro Val Ser Arg Asn Phe	Ser Ser Pro Ile Leu	
	200	205	210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala Asp	Asp Pro Asp Ser Ser	
	215	220	225
Met Val Leu Leu	Cys Leu Leu Leu Val Pro	Leu Leu Leu Ser Leu	
	230	235	240
Phe Val Leu Gly	Leu Phe Leu Trp Phe Leu	Lys Arg Glu Arg Gln	
	245	250	255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg Val	Asp Ile Cys Arg Glu	
	260	265	270
Thr Pro Asn Ile	Cys Pro His Ser Gly Glu	Asn Thr Glu Tyr Asp	
	275	280	285
Thr Ile Pro His	Thr Asn Arg Thr Ile Leu	Lys Glu Asp Pro Ala	
	290	295	300
Asn Thr Val Tyr	Ser Thr Val Glu Ile Pro	Lys Lys Met Glu Asn	
	305	310	315
Pro His Ser Leu	Leu Thr Met Pro Asp Thr	Pro Arg Leu Phe Ala	

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctgggtcccc aacatgcctc accctcatct atactccttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt cgttggtgg 100
ggcctgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgcca ccatacagcc agaagggggc 200
actatcatag tgaccacaaa tcgtaatagg gagagagtag acttcccaga 250
tggagggtac tccctgaagc tcagcaaact gaagaagaat gactcagggg 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccagg 350
gagtaactgc tgcattgcta cgagcacctg tcaaagccta aagtaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctgaa ggccctgggg 500
caagcagcca atgagtcaca taatgggtcc atcctcccca tctctggag 550
atggggagaa agtgatatga ccttcattct cgttgccagg aacctgtca 600
gcagaaaact ctcaagcccc atccttgcca ggaagctctg tgaaggtgct 650
gctgatgacc cagattctc catggtcctc ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctcttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaagggaagt ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta ttgctctatg agaatgttat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtccctgacag acagacaatc ctattcccta ccaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ctcogaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggtcga cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gcogagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
 tatccaatgc caatogctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggaactccac catcatccct 650
 tctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttctttaaa tttctcttg atacaccctt 800
 gacaattttt catgaaatta ttctctctcc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
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 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
125 130 135

Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
140 145 150

Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
155 160 165

Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
170 175 180

<210> 257
<211> 766
<212> DNA
<213> Homo sapiens

<400> 257
ggctcgagcg tttctgagcc aggggtgacc atgacctgct gogaaggatg 50
gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatgt 150
tctcaaaacc ccactctctg ctttgagtgg tggttcccg gaattatagg 200
agcaggctgt atggccattc cagcaacaac aatgtccttg acagcaagaa 250
aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
agtgtgatca cagtcattgg tgctctgtat tgcattgtga tatccatcca 350
ggctctctta aaaggctctc tcatgtgtaa ttctccaagc aacagtaatg 400
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500
caataaaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
gtatttttag gtctattgct tgttgaatt ctggaggctc tgtttgggct 650
cagtcagata gtcacgtggt tccttggtg tctgtgtgga gtctctaagc 700
gaagaagta aattgtgtag tttaatggga ataaaatgta agtatcagta 750
gtttgaaaaa aaaaaa 766

<210> 258
<211> 229
<212> PRT
<213> Homo sapiens

<400> 258
Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
1 5 10 15

Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
20 25 30

Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35		40		45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50		55		60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65		70		75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80		85		90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95		100		105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110		115		120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125		130		135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140		145		150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155		160		165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170		175		180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185		190		195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200		205		210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215		220		225
Ser Gln Ile Val					

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtggt gtctcctgat ggtctcgtgt gccctttgct 100
 gctaccaggc ccatgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtctctcttat tcttaagtga cgtgcggta aacctccaag ttgccaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgacacagat atcttttaag aaacgactct cattgaaaaa gtctcgtgtg 300
 aaatagttaa aaaatgttgt gtgtgacatg taaaaatgct caacctgtgt 350
 tccaaagtct tccaacgaca cctgatctt cactaaaaat tgtaaaggtt 400

tcaacacggt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgtttctc tgcgctgccca gctcaggtga gccctcgcca aggtgacctc 50

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ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctogaac tgtgacatgg 200

agagagtgac cctggccctt ctctactgg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat ccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccaactcatc ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taaacactggc ccccgacacc tctctccctg ggaggcctta tctcaagga 550

aggactttct tccaagggca ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc cctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262
 Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
 1 5 10 15
 Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
 20 25 30
 Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
 35 40 45
 Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
 50 55 60
 Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
 65 70 75
 Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
 80 85

<210> 263
 <211> 1676
 <212> DNA
 <213> Homo sapiens

<400> 263
 ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50
 ctgagcctcg cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
 actcctgctg ctgggtgtgg gctcctggct actgccccg atcctggctt 150
 ggacctatgc ctctataaac aactgccgcc ggctccagtgt ttcccacag 200
 cccccaaaac ggaactgggt ttgggggtcac ctgggacctga tcaactctac 250
 agaggagggc ttgaaggact cgaccagat gtcggccacc tattccacag 300
 gctttaacgt atggctgggt cccatcatcc ccttcacgtt ttatgccac 350
 cctgacacca tccggtctat caccaatgcc toagctgcca ttgcacccaa 400
 ggataatctc ttcacaggt tccctgaagcc ctggctggga gaaggagatac 450
 tgctgagtgg cgggtgacaag tggagccgcc accgtcggat gctgacgccc 500
 gccttcacct tcaacatcct gaagtcctat ataacgatct tcaacaagag 550
 tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
 gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
 cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700
 atatattgcc accatccttg agctcagtc ccttgtagag aaaagaagcc 750
 agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800
 cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgtgt 850
 catccgggag cggcgtcgca cctcccccac tcagggtatt gatgattttt 900
 tcaaaagaca agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 ttctctgggt cctgtacaac cttgcgaggg acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgatc cttaaagatg 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcactctccc atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300
 cctcatogat attatagggg tccatcaca cccaactgtg tggccggatc 1350
 ctgaggtcta cgacccttc cgttttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctcgca gggcccagga actgcatcgg 1450
 gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgtctg 1500
 tgcacttcgg gttcctgcca gaccacactg agcccgcag gaagctggaa 1550
 ttgatcatgc gcgcgaggg cgggcttttg ctgcgggttg agcccctgaa 1600
 tgtaggcttg cagtacttt ctgaccatc cacctgtttt ttgacagatt 1650
 gtcataata aaacgggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Lys
 125 130 135

Ile	Leu	Leu	Ser	Gly 140	Gly	Asp	Lys	Trp	Ser 145	Arg	His	Arg	Arg	Met 150
Leu	Thr	Pro	Ala	Phe 155	His	Phe	Asn	Ile	Leu 160	Lys	Ser	Tyr	Ile	Thr 165
Ile	Phe	Asn	Lys	Ser 170	Ala	Asn	Ile	Met	Leu 175	Asp	Lys	Trp	Gln	His 180
Leu	Ala	Ser	Glu	Gly 185	Ser	Ser	Arg	Leu	Asp 190	Met	Phe	Glu	His	Ile 195
Ser	Leu	Met	Thr	Leu 200	Asp	Ser	Leu	Gln	Lys 205	Cys	Ile	Phe	Ser	Phe 210
Asp	Ser	His	Cys	Gln 215	Glu	Arg	Pro	Ser	Glu 220	Tyr	Ile	Ala	Thr	Ile 225
Leu	Glu	Leu	Ser	Ala 230	Leu	Val	Glu	Lys	Arg 235	Ser	Gln	His	Ile	Leu 240
Gln	His	Met	Asp	Phe 245	Leu	Tyr	Tyr	Leu	Ser 250	His	Asp	Gly	Arg	Arg 255
Phe	His	Arg	Ala	Cys 260	Arg	Leu	Val	His	Asp 265	Phe	Thr	Asp	Ala	Val 270
Ile	Arg	Glu	Arg	Arg 275	Arg	Thr	Leu	Pro	Thr 280	Gln	Gly	Ile	Asp	Asp 285
Phe	Phe	Lys	Asp	Lys 290	Ala	Lys	Ser	Lys	Thr 295	Leu	Asp	Phe	Ile	Asp 300
Val	Leu	Leu	Leu	Ser 305	Lys	Asp	Glu	Asp	Gly 310	Lys	Ala	Leu	Ser	Asp 315
Glu	Asp	Ile	Arg	Ala 320	Glu	Ala	Asp	Thr	Phe 325	Met	Phe	Gly	Gly	His 330
Asp	Thr	Thr	Ala	Ser 335	Gly	Leu	Ser	Trp	Val 340	Leu	Tyr	Asn	Leu	Ala 345
Arg	His	Pro	Glu	Tyr 350	Gln	Glu	Arg	Cys	Arg 355	Gln	Glu	Val	Gln	Glu 360
Leu	Leu	Lys	Asp	Arg 365	Asp	Pro	Lys	Glu	Ile 370	Glu	Trp	Asp	Asp	Leu 375
Ala	Gln	Leu	Pro	Phe 380	Leu	Thr	Met	Cys	Val 385	Lys	Glu	Ser	Leu	Arg 390
Leu	His	Pro	Pro	Ala 395	Pro	Phe	Ile	Ser	Arg 400	Cys	Cys	Thr	Gln	Asp 405
Ile	Val	Leu	Pro	Asp 410	Gly	Arg	Val	Ile	Pro 415	Lys	Gly	Ile	Thr	Cys 420
Leu	Ile	Asp	Ile	Ile 425	Gly	Val	His	His	Asn 430	Pro	Thr	Val	Trp	Pro 435
Asp	Pro	Glu	Val	Tyr 440	Asp	Pro	Phe	Arg	Phe 445	Asp	Pro	Glu	Asn	Ser 450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465
Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480
Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495
Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510
Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgtttgct ttccacagga ttcttaaact ctctcttctc 100
tcttctctc cttgaactcca gggaaatata ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaaca tttttaaccc aagaggaaaat ttgagaaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttccaag gaatgtacat cagccccacg gaagctaggc 50
cacctctggg atgggggttg tggtttaaaa caaacgccag tcatcctata 100
taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
acctgtctgc aaccacgtg aggccatgcc ctccccaggg accgtctgca 200
gcctcctgct cctcggcatg ctctggctgg acttggccat ggcaggctcc 250
agcttcttga gccctgaaca ccagagagtc cagcagagaa aggagtcaa 300
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaagggggcag aggatgaact ggaagtccgg 400
ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
aggccaaaaga ggccccagcc gacaagtgat cgccacaaag ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgott gcttctgcag 600
caactccacc gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu
50 55 60
Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg
65 70 75
Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln
80 85 90
Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile
95 100 105
Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys
110 115

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

cggccacagc tggcatgctc tgccctgatcg ccacccctgct gtatgtcctc 50
gtccagtacc togtgaaccc cgggggtgctc cgcacggacc ccagatgtca 100
agaatatgaa cacgtggctg ctgttctctcc cctgttctcc ggtgcagggtg 150
cagaccctga tagtcgtgat catcgggagtg ctcgtgtctcc tgctggagctt 200
tcttggtctg gtgcacctgg gccagctgct catcttctcc atctacctga 250
gtatgtctccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
gctgctctac ttacacctct acttgagtat gtccctaacc ctgagccccc 350
cacgctctgg gccagagtct ttgtcccccg tgtgcatgct tgttcagggt 400
cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450
gaaattaaat ccattgaggac ccagcaggcc cagcaagaag ctgaactcac 500
gccagagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
tgttcaagaa caattggaat gaattctatta ggcaagaaca ggacattatg 600
aaataaggac aggtgggactt ccaaaaaaac aagtagaaat tctaacaatg 650
aaatatatta caggcagggtc acccactaac caaacaactg aagcgagagc 700
tgtgtgtctg cttgtgtctc cagtggggcac agcggtaggc ggtcagtcac 750
gttgtctgac gacggagggt aaactcccca gccccaagaa aaactgtgtt 800
ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850
tgggccagct gcaaagcgtc ttccattctc tgggcagtggt tggccccag 900
gctgtggcct ctcaggggggt ttctgtggac acgggcagca gagtgtgtcc 950
aggccagccc ccaagaatgc cctgctcctg acagcttggc caacctctg 1000
tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100
 acacaccccca ccaagagcct ccttgttcat aaccacaggt tacccataaa 1150
 accactgtcc ccacacaacc ctgggggatgt tttaaaaacac acacctctaa 1200
 cgcatacttt acagtcaactg ttgtcttgcc tgaggggtga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atccctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtcgaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctccaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaagtgcc caagcccctg 200
 tgcgagaaa gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccaegtgtga aggccatgt caccocactc tccgatttgg agggaagcgg 500
 ttgatggaga aggcctccct cccctcccct ccttgggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcatcagct tcctcctgct actaacagac ttgtactca ctgggaaccc 650
 tgctgtggg ctcaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatggtg gccacatga tgtattcaca agtcttcaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggctctc ctccacctgc tgcattggcg 850
 cggctgtcac caccttcaac acgtacacca ggatgggtgt ggagttaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccacagtggt ttccctcggc ggctgtcaag tgcacggccc accgtgggtc 1000
 ctttgaccag ctaccaccag taccataatc agcccatcca ctctgtctct 1050
 gagggagtgc acttctactc cgagctgcgg aacaaggatg ttcaaagagg 1100
 ggcacggcag gagctgaaag aagcagttag gtcctctgta gaggaagagc 1150
 agtgtagga gtaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggtacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttctgggtg ccaactgctct ctttctctct acagctccat 1350
 cttgtttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggtatc gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15

Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
				20						25				30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Pro Lys Pro Leu Cys Glu Lys Gly Leu Ala Ala Lys Cys Phe Asp	50	55	60
Met Pro Val Ser Leu Asp Gly Asp Thr Asn Thr Ser Thr Gln Glu	65	70	75
Val Val Gln Tyr Asn Trp Glu Thr Gly Asp Asp Arg Phe Ser Phe	80	85	90
Arg Ser Phe Arg Ser Gly Met Trp Leu Ser Cys Glu Glu Thr Val	95	100	105
Glu Glu Pro Gly Glu Arg Cys Arg Ser Phe Ile Glu Leu Thr Pro	110	115	120
Pro Ala Lys Arg Gly Glu Lys Gly Leu Leu Glu Phe Ala Thr Leu	125	130	135
Gln Gly Pro Cys His Pro Thr Leu Arg Phe Gly Gly Lys Arg Leu	140	145	150
Met Glu Lys Ala Ser Leu Pro Ser Pro Pro Leu Gly Leu Cys Gly	155	160	165
Lys Asn Pro Met Val Ile Pro Gly Asn Ala Asp His Leu His Arg	170	175	180
Thr Ser Ile His Gln Leu Pro Pro Ala Thr Asn Arg Leu Ala Thr	185	190	195
His Trp Glu Pro Cys Leu Trp Ala Gln Thr Glu Arg Leu Cys Cys	200	205	210
Cys Phe Leu Cys Pro Val Arg Ser Pro Gly Asp Gly Gly Pro His	215	220	225
Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg	230	235	240
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His	245	250	255
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His	260	265	270
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala	275	280	285

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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<210> 274
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 274
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 35 40 45
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
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 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
<211> 2694
<212> DNA
<213> Homo sapiens

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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

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Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20					25					30	
Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
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<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

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Met	Leu	Pro	Ala	Ala	35	Pro	Ser	Gly	Cys	40	Pro	Gln	Leu	Cys	Arg	45
Glu	Gly	Arg	Leu	Leu	50	Tyr	Cys	Glu	Ala	55	Leu	Asn	Leu	Thr	Glu	60
Pro	His	Asn	Leu	Ser	65	Gly	Leu	Leu	Gly	70	Leu	Ser	Leu	Arg	Tyr	75
Ser	Leu	Ser	Glu	Leu	80	Arg	Ala	Gly	Gln	85	Phe	Thr	Gly	Leu	Met	90
Leu	Thr	Trp	Leu	Tyr	95	Leu	Asp	His	Asn	100	His	Ile	Cys	Ser	Val	105
Gly	Asp	Ala	Phe	Gln	110	Lys	Leu	Arg	Arg	115	Val	Lys	Glu	Leu	Thr	120
Ser	Ser	Asn	Gln	Ile	125	Thr	Gln	Leu	Pro	130	Asn	Thr	Thr	Phe	Arg	135
Met	Pro	Asn	Leu	Arg	140	Ser	Val	Asp	Leu	145	Ser	Tyr	Asn	Lys	Leu	150
Ala	Leu	Ala	Pro	Asp	155	Leu	Phe	His	Gly	160	Leu	Arg	Lys	Leu	Thr	165
Leu	His	Met	Arg	Ala	170	Asn	Ala	Ile	Gln	175	Phe	Val	Pro	Val	Arg	180
Phe	Gln	Asp	Cys	Arg	185	Ser	Leu	Lys	Phe	190	Leu	Asp	Ile	Gly	Tyr	195
Gln	Leu	Lys	Ser	Leu	200	Ala	Arg	Asn	Ser	205	Phe	Ala	Gly	Leu	Phe	210
Leu	Thr	Glu	Leu	His	215	Leu	Glu	His	Asn	220	Asp	Leu	Val	Lys	Val	225
Phe	Ala	His	Phe	Pro	230	Arg	Leu	Ile	Ser	235	Leu	His	Ser	Leu	Cys	240
Arg	Arg	Asn	Lys	Val	245	Ala	Ile	Val	Val	250	Ser	Ser	Leu	Asp	Trp	255
Trp	Asn	Leu	Glu	Lys	260	Met	Asp	Leu	Ser	265	Gly	Asn	Glu	Ile	Glu	270
Met	Glu	Pro	His	Val	275	Phe	Glu	Thr	Val	280	Pro	His	Leu	Gln	Ser	285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
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Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
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Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
				500					505					510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
				515					520					

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
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 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
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tggacagaag ctggttgaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccctttat ctgcagcaa tgtgttgctt gtgattcgaa 400
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cagtagcaca gtaggagaag tgggttctgt atcttgtgga gtggaatctt 500
cctcatgtac ctgtttcttc tctggatgtt gtcccactga attcccatga 550
atacaaacct attcagcaac agcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
1 5 10 15
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20								25						30
Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe	
				35					40					45	
Cys	Ile	Leu	Gln	Ser	Leu	Ala	Leu	Thr	Trp	Tyr	Ser	Leu	Ser	Phe	
				50					55					60	
Ile	Pro	Phe	Ala	Arg	Asp	Ala	Val	Lys	Lys	Cys	Phe	Ala	Val	Cys	
				65					70					75	
Leu	Ala														

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
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 gagagaaaa tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250
 cgaaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300
 acctttttct tccaaactaga ccagcaaaag gttctactag ttcttttga 350
 tggattccgt tgggattact tatataaagt tccaacgcc cattttcatt 400
 atattatgaa atatggtgtt cactgaagc aagtactaa tgtttttatt 450
 acaaaaaact accctaacca ttatactttg gtaactggc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatgtt tgatcctatt cggaaacaaat 550
 ctttctcctt ggatcacatg aatatttatg attccaagt ttgggaagaa 600
 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgtgtc 650
 agccatgtgg ccggaacag atgtaaaaat acataagcgc tttcctactc 700
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 accagtaact ggataaagac cactataccc tgattgatca atctccagta 1050
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 tagccatggt tctgccttc agaaagaatt tctcaaaaga agccatgaac 1350
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 cactgtagca tagggataga taagatcctg ctttatttgg acttggcgca 1950
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 catgtcacag aataactgtt acgcattgtt caaactgaag gaaatttcta 2150
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 aagaaggtga taagtgttga aaattaaatg tgataacctt tgaaccttga 2250
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 aagacaccat gaataactt tcttcttata tagttcagca atggcctgaa 2500
 tagaagcaac caggcaccat ctacgcaatg ttttctcttg tttgtaatta 2550
 tttgtcctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600
 ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu
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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
			20						25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
			35						40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
			50						55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
			65						70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
			80						85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
			95						100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
			110						115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
			125						130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
			140						145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
			155						160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
			170						175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
			185						190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
			200						205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
			215						220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
			230						235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
			245						250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
			260						265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
			275						280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Leu Gln Ala	
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
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 tcacacagcc aaaggaggca gagccagaac tcacaaccac atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggcaa 250
 ggtggctccc gctgagagga tgagcaagtt cttaaggcac ttacgggtcg 300
 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca cccccacac cagtctcagg 400
 cgagggaagg agagctgcag cccctgcagt tgcccctgcc cctggccccg 450
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tcccacaggt ttcaggtcat catcatctgc ttggtgggtc tggatgccct 550
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 ctgggcctgc tgattctgct ccggtctgtg cgggtggccc ggatcatcaa 850
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 taaaacagat gaatgtacaa ttggccgccca agattcaaca ccttgagttc 950
 agctgctctg agaagcccct ggactgatga gtttgctgta tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcttga gtaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatgtt cactgggctg gtgttacgac 1150
 agagaacctg acagtcactg gccagttatc acttcagatt acaaatcaca 1200
 cagagcatct gcctgttttc aatcacaaaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300
 taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1337

<210> 287
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 287
 Met Ala Thr Trp Asp Glu Lys Ala Val Thr Arg Arg Ala Lys Val
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 Ala Pro Ala Glu Arg Met Ser Lys Phe Leu Arg His Phe Thr Val
 20 25 30
 Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
 35 40 45
 Glu Asn Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
 110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
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 ccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150
 aagtccattt tcaagctcag tgtcttcato cctcccagg aattctccac 200
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250
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 aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggagc 350
 cattgacgcg caggagatca tgcagtcctc gcgggacttg ggagtcaaga 400
 tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450
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gccagtactc	aggaatgctg	gactgcgcga	ggaggtacct	ggccagagag	1050
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cccctatgcc	ggcatcgacc	ttgcagtcta	cgagacgctc	aagaatgcct	1150
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 ggctggagga gaggggtggg ggctggctcc gtccctccca gccttctgct 3050
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 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
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 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
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<210> 290

<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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 <213> Homo sapiens

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 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

	155		160		165
Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
	170	175	180		
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185	190	195		
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200	205	210		
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215	220	225		
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230	235	240		
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245	250	255		
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
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 <213> Homo sapiens

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<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

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			20						25					30	
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu	
			35						40					45	
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro	
			50						55					60	
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu	
			65						70					75	
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu	
			80						85					90	
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp	
			95						100					105	
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln	
			110						115					120	
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro	
			125						130					135	
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro	
			140						145					150	

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Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
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<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

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35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
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Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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<210> 297
<211> 341
<212> PRT
<213> Homo sapiens

<400> 297
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35 40 45
Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr
50 55 60
Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

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 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
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 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe
 80 85 90
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro
 95 100 105
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val
 110 115 120
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met
 125 130 135
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp
 140 145 150
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu
 155 160 165
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile
 170 175 180
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val
 185 190 195
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His
 200 205 210
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu
 215 220 225
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu
 230 235 240
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys
 245 250 255
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu
 260 265 270
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala
 275 280 285
 Ile Trp His Ile Ser Thr Thr Ile Pro Val His Val Leu Phe Phe Ser
 290 295 300
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 305 310 315
 Lys Phe Lys Leu Asp
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<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

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			20						25					30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	
			35						40					45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	
			50						55					60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	
			65						70					75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	
			80						85					90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	
			95						100					105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	
			110						115					120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	
			125						130					135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	
			140						145					150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	
			155						160					165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	
			170						175					180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	
			185						190					195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	
			200						205					210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	
			215						220					225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	
			230						235					240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	
			245						250					255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	
			260						265					270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	
			275						280					285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe	

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
425	430	435
Glu Leu Gln Asp Glu Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg		
455	460	

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

<400> 302
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 tcgtggggtc gcgttgccac cccacgcgga cccccagct ggcgcgccc 150
 tccatttgc ctgtcctggt caggcccca ccccttcc cactgacca 200
 gccatggggg ctgcggtgtt ttctggtgc acttctgtcg cgttcggccc 250
 ggcttctcg cttttcttga tcaactgtgc tggggaccgc cttcgcgtta 300
 tcatcctggt cgcaggggca tttttctggc tggctctccct gctcctggcc 350
 tctgtgtctt ggttcatctt ggtccatgtg accgaccggt catagcccg 400
 gctccagtac ggctcctga ttttgggtgc tggctctctt gctcttctac 450
 aggagggtgt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500
 gggtagcat cgctgagtga ggacggaaga taccatctt ccatccgcca 550

gatggcctat gtttctggtc tctccttcgg tatcatcagt ggtgtcttct 600
ctgttatcaa tattttggct gatgcacttg ggcaggtgt ggttgggac 650
catggagact caccctatta ctctcgtact tcagcctttc tgacagcagc 700
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750
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acatcgggac tgacattcct gaacctcctg tatgaggcca gctgctgcc 850
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gagggtccct ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950
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cgtcgggtcta cccactacc tccagggttt tgccttctgc ttttgtgacc 1100
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtgcagta 1150
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tgtgtccagg actccctctg tgtcagtgct ctgctctcac cctgcccag 1250
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ggtggagtgt cccatccttt taatcaaggt gattgtgatt ttgactaata 2050
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
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 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
 <222> 108, 123, 126, 154, 198, 206, 217
 <223> unknown base

<400> 304
 aagctggttt aaggaagcag aggaggggta gattcgttga gtgaggacgg 50
 aagatcaacc catttccatt ccgccagatg gcctatgttt ctggctctctc 100
 ccttcggnat catcagtggg gntttntctg ttatcaatat ttggctgat 150
 gcantgggc caggtgtggg tgggatccat ggagactcac cctattantt 200
 cctganttca gcctttntga cagcagccat tatcctgctc 240

<210> 305
 <211> 378
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
 <223> unknown base

<400> 305
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 ctgctgtntc tgctcttcta caggaggtgt tccgctttgc ctantacaag 100
 ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
 atcaccatt tccatccgcc agatggccta gtttntggg ntttccttcg 200
 gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
 gggccaggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300
 ttcagccttt ntgcagcag ccatatcct gntccatacc ttttggggag 350
 ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1, 22, 129, 133, 184
 <223> unknown base

<400> 306
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 gcgttgccac ccacgcgga ctccccagnt gngcgccct tccattttgc 150
 ctgtctctgg caggccccca ccccccttc cacntgacca gccatggggg 200
 ctgcgggtgt tttcggctgc actttcgtcg cgttcgggcc ggccttcgcg 250

cttttcttga tcaactgtggc tggggaccog cttcgcgtta tcactcgtgt 300
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtgtgt 350
 ggttcatctt ggtccatgtg accgaccggt cagatgcccg gctccagtac 400
 ggctctctga tttttgggtg tgctgtctct gtcctttac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggaagggaaga tcacccatct ccacccgcca gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtctctt ctgttatcaa 600
 tatttttggt gatgcacttg ggccagggtg ggttgggatc catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cnttccccgg ggtctgtggg tgacattgca ccgcgccnt cgtggggctg 100
 cgttgccacc ccacggcgac tccccagntg gcgcgccct ccattttgcc 150
 tgtcctggtc agggccccac cccccctccc acctgaccag ccattggggc 200
 tgccgtgttt ttggggctgc actttcgtcg cgttcggggc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctggtctccc tgctcctggc ctctgtgtgc 350
 tggttcatct tgggtccatg gaccgaccg tcagatgccc ggctccagta 400
 cggcctcctg atttttgggt ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggaagggaag atcaccatc tccatccggc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtctctt tctgttatca 600
 atattttggc tgatgcactt ggccagggtg tggttgggat ccattggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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gctggggagca	aatccccccac	cccctacctg	ggggacaggg	caagtgtagac	150
ctggttgaggg	tggctcagca	ggcaggggaag	gagaggtgtc	tgtgcgtcct	200
gcacccacat	ctttctctgt	cccctccttg	ccctgtctgg	aggctgtctag	250
actcctatct	tctgaattct	atagtgcctg	ggtctcagcg	cagtgccgat	300
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gccatggcta	cagcaagacc	cccctggatg	tgggtgtctct	gtgctctgat	400
cacagccttg	cttctggggg	tcacagagca	tgttctcgcc	aacaatgatg	450
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ctgggagctg	gggcccggga	agacgcccg	tcggatgaca	gcagcagccg	550
catcatcaat	ggatccgact	gcgatatgca	caccacagccg	tggcaggccg	600
cgctgttgtc	aaggcccaac	cagctctact	gcggggcggt	gttggtgcac	650
ccacagtggc	tgctcagcgc	cgcccactgc	aggaagaaag	ttttcagagt	700
ccgtctcggc	cactactccc	tgtcaccagt	ttatgaatct	gggcagcaga	750
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cactctaacg	acctcatgct	catcaaaactg	aacagaagaa	ttcgtccacc	850
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caaagtgtct	ggtgtctggc	tgggggacaa	ccaagagccc	ccaagtgcac	950
ttccctaagg	tctctcagtg	cttgaatatc	agcgtgctaa	gtcagaaaaa	1000
gtgcgaggat	gcttaccoga	gacagataga	tgacaccatg	ttctgcgcgc	1050
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agaccctcat	tccttcccag	agatgttgag	aatgttcac	tctccagccc	1350
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gcgggggttg	cgtctcaatc	tccttggggc	acttctatcc	tcaagctcag	1500
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ctgagaagtg	gaaaaaaaaa	1570			

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu
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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
				65					70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
				80					85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
				110					115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
				125					130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
				140					145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
				155					160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
				170					175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
				185					190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
				200					205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
				215					220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
				230					235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
				245					250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
				260					265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
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Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
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<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc goatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc ccccactgt 200
 cgtcagcact ggggctgccca ggcaccaagc cgccttggtc actgtggaaa 250
 gggcggacag ctgcacacgc agcatcctca ttgaccgcgc gtgccccgac 300
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 ggcgctgaca gaggaccagg cccagccacg gctggtgggc gaccaggagc 400
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agcttctctc tgagagccag ggcacatgg ctacactggt gaactccgtc 600
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 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
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 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
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 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
110		115	120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
125		130	135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
140		145	150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
155		160	165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala	Leu Gln Ser Glu Gln	Gly
170		175	180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala	His
185		190	195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg	Asp
200		205	210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg	Ala
215		220	225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser	Arg
230		235	240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp	Asp
245		250	255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe	Gln
260		265	270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val	Phe
275		280	285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp	Asp
290		295	300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp	Leu
305		310	315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Gln Ala Ala Tyr	Glu
320		325	330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr	Ala
335		340	345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Phe Ser Val Asp Pro	Glu
350		355	360
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala
365		370	375
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys
380		385	390
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr
395		400	405
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn
410		415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggcgggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
 gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50
 ctttttagtgc cttgcttcc gaactagctc acagtagccc ggcggcccag 100
 ggcaatccga ccacatttca ctctcaccgc tgttaggaatc catagtcagg 150
 ccaagtacag cagcagcagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagccctgc attctcaagc ctctgccaca actcggcatc cagagcccag 250
 gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300
 cctgtgtgac tttgtgcttg gtgctgtga tagggctggc agccctgggg 350
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacacccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag ctgtgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
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 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgcccgcgc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750
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 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tggagaagcc agagagcctc 950
 catgtcccc ctgaacatt aggcgaaggt gactgattcg cctctgcaa 1000
 ctacaaatag cagagtgagc caggcgggtc caaagcaagg gctagttgag 1050
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 aaaatggggt ctcggttttc ctgttcagga tcaccagcat ttctgagctt 1150
 ggggttatgc acgtatttaa cagtccaaag aagtcttatt tacatgccac 1200
 caaccaacct cagaaaccca taatgtcatc tgcctctgtg gcttagagat 1250
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 atccccatct ccgtttcata tcagaactac cgtcccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgagcc tcttcatctg cacctgtaat 1750
 agtttcaggt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319

<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Phe	Phe	Gln	Tyr	
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
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gggacatgnt ggatgatgat gggacaccac catgagcctg catntcaag 100
cttttgcac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
ggtgctgctg atagggctgg cagccctggg gcttttgttt tttagtact 250
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ttaggaaata cgtccaaga gttgcaattt nttcaagtcc agaataataa 350
gcttgacgga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
atacaaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgctgacg acttctgca agc 23

<210> 323
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgcttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctg gatg atgatgggga caccaccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

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gagggagcgg gcccgccgcg ggggcccgag cctccggat ccgccccctc 150
cccggtccgc cccctcggga gactcctctg gctgctctgg ggggtcgcgc 200
gggcggggga ccccggttcc gggcgccatg cgggcacgcg tctgctgtgc 250
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<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

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Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser	30
				20					25						
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro	45
				35					40						
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg	60
				50					55						
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly	75
				65					70						
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro	90
				80					85						
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg	105
				95					100						
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu	120
				110					115						
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val	135
				125					130						
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe	150
				140					145						
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val	165
				155					160						
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala	180
				170					175						
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe	195
				185					190						
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala	210
				200					205						
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr	225
				215					220						
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly	240
				230					235						
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu	255
				245					250						
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile	270
				260					265						

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu	Asp
275		280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His	Tyr
290		295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly	Asp
305		310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp	Pro
320		325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu	Leu
335		340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile	Gln
350		355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala	Trp
365		370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe	Glu
380		385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser	Cys
395		400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg	Ala
410		415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn	Arg
425		430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val	Asn
440		445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr	Leu
455		460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg	Pro
470		475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val	Glu
485		490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr	Val
500		505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly	Phe
515		520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala	Ala
530		535	540
Ala Ala Leu Thr	Leu Leu Leu Tyr	Glu Pro Arg Gln Ala	Gln
545		550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His	Val
560		565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp	Leu
575		580	585

Ser	Val	Gln	Thr	Ala	Ala	Pro	Ser	Pro	Leu	Arg	Leu	Met	Asp	Leu
				590					595					600
Leu	Ser	Lys	Lys	His	Pro	Leu	Asp	Thr	Leu	Phe	Leu	Leu	Ala	Gly
				605					610					615
Pro	Asp	Thr	Val	Leu	Thr	Pro	Asp	Phe	Leu	Asn	Arg	Cys	Arg	Met
				620					625					630
His	Ala	Ile	Ser	Gly	Trp	Gln	Ala	Phe	Phe	Pro	Met	His	Phe	Gln
				635					640					645
Ala	Phe	His	Pro	Gly	Val	Ala	Pro	Pro	Gln	Gly	Pro	Gly	Pro	Pro
				650					655					660
Glu	Leu	Gly	Arg	Asp	Thr	Gly	Arg	Phe	Asp	Arg	Gln	Ala	Ala	Ser
				665					670					675
Glu	Ala	Cys	Phe	Tyr	Asn	Ser	Asp	Tyr	Val	Ala	Ala	Arg	Gly	Arg
				680					685					690
Leu	Ala	Ala	Ala	Ser	Glu	Gln	Glu	Glu	Glu	Leu	Leu	Glu	Ser	Leu
				695					700					705
Asp	Val	Tyr	Glu	Leu	Phe	Leu	His	Phe	Ser	Ser	Leu	His	Val	Leu
				710					715					720
Arg	Ala	Val	Glu	Pro	Ala	Leu	Leu	Gln	Arg	Tyr	Arg	Ala	Gln	Thr
				725					730					735
Cys	Ser	Ala	Arg	Leu	Ser	Glu	Asp	Leu	Tyr	His	Arg	Cys	Leu	Gln
				740					745					750
Ser	Val	Leu	Glu	Gly	Leu	Gly	Ser	Arg	Thr	Gln	Leu	Ala	Met	Leu
				755					760					765
Leu	Phe	Glu	Gln	Glu	Gln	Gly	Asn	Ser	Thr					
				770					775					

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgaatgttctg 20

<210> 329

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 329
 atggctcagt gtgcagacag 20

 <210> 330
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 330
 gcatgctgct ccgtgaagta gtcc 24

 <210> 331
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 331
 atgcatggga aagaaggcct gcc 24

 <210> 332
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 332
 tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

 <210> 333
 <211> 1095
 <212> DNA
 <213> Homo sapiens

 <400> 333
 gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
 gctctctctg attggcaagc gctggccacc tccccacacc ctttgcaaac 100
 gctccccctg tggagaaaag gactagctat tagccaatc gccagggccc 150
 gctttttaga agcttgattt ctttgaaga tgaagaacta gcggaagctc 200
 tgctctttc cccagtgggc gagggaactc ggggcgattg gctgggaact 250
 gtatocacc aaatgtcacc gatttcttcc tatgcaggaa atgacgagac 300
 ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
 gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgcccccta gaccctgcag caccatctgt catggcggtg gggtctttg 550
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgag agggctccc 600
 gccgccccgc tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800
 cttctctctt ggctcttcca tcatccttgt ccttggcagc acctttgttg 850
 cctatctgcc tgactacagg atgaaagagt ggtccgcgcg cgaagctgag 900
 aggccttgtg aataccgaga ggccaatgac cttcccatca tggaatccaa 950
 ctgctctgac ccagcaaga tccagctgcc agaggatgag tgaccagtgt 1000
 ctaagtgggg ctcaagaagc accgccttcc ccacccctcg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 334
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala
 1 5 10 15
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu
 20 25 30
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
 35 40 45
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
 50 55 60
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
 65 70 75
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
 80 85 90
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
 95 100 105
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
 110 115 120
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
 125 130 135
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
 140 145 150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttggtt tgagcgcctcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgcgcc gctgggaatc tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200
agaagaaccc agactcccat ggttatgaca aggaccccg tttggacgtc 250
tggaaatcgc gaattgtctt cttctttggc gtctccatca tcctggctct 300
tggcagcacc tttgtgcct atctgcctga ctacaggatg aaagagtgg 350
cccgcgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatg aatccaactg ctcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagcccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtegccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggcta tgccgcttgc tctgctcgto ctgttgctcc tggggcccgg 50
cggtcgggtgc cttgcagaac ccccacgcga cagcctgcgg gaggaacttg 100
tcatacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgcgtgg attcggagct tcagcgggaa ggagtgctcc attacaggct 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacacaa ggcttttgga ggaccggata ctggggggcca 300
ccctctctgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccactg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctactttctg cgctatgctg tgctgcgcgc ggaggtggtc tgcaccgaaa 550
acctcaccct ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600
tctgtgtgct tgaaggcaga tcgcttggtc cacaccagct accactccca 650
ggcagtgcat atccgccctg ttgacagaaa tgcacgctgt actagcatct 700
cctggggagct gaggcagacc ctgtcagttg tatttgatgc ctcatcacg 750
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaacct 800
cacggagccc tgccccttg cttcagagag ccgagtttat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatate aggacgtcat cctaggcact cggaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaaat agggcccccct agtgccttc 1050
ctgcatgccc agcggtagct gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc cgggtgctgc 1150
tgctggacac cgtaccctg tatctgcgga tgatgtgca caccctcacc 1200
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgcccaggac cggctgcaac cccacctct ggagatgctg attcagctgc 1300
cggccaactc agtcaccaag gtttccatcc agtttgagcg ggcgctgctg 1350
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atctgtcctc agcgccttg tgcccagcat ggtagcagc aagccagtgg 1450
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tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcatcg 1600
tggtggccgt gtgtacggc tcttctaca atctcctcac ccgaaccttc 1650
cacatcgagg agcccgac aggtggcctg gccaaaggcg tggccaacct 1700
tatccggcgc gcccgaggtg tcccccaact ctgattcttg ccctttocag 1750
cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800
tgccacttgc tctcctcaga gtgtgctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtgtt cggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aagtgcgct 2050
ggcagcactg gccaaagtga tgggggtgtc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gttccgtgg 2150
aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	1	5	10	15
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	20	25	30	35
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	40	45	50	55
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	60	65	70	75
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	80	85	90	95
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	100	105	110	115
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	120	125	130	135
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	140	145	150	155
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	160	165	170	175

Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	155	160	165
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	170	175	180
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	185	190	195
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	200	205	210
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	215	220	225
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	230	235	240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	245	250	255
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	260	265	270
Ala	Ser	Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	275	280	285
Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr	Thr	Thr	Tyr	290	295	300
Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile	Tyr	Asp	305	310	315
Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn	Ile	320	325	330
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val	335	340	345
Pro	Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	350	355	360
Lys	Gly	Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	365	370	375
Ala	Phe	Pro	Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	380	385	390
Leu	Tyr	Val	His	Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	395	400	405
Lys	Pro	Ser	Tyr	Ile	His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	410	415	420
Pro	His	Leu	Leu	Glu	Met	Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	425	430	435
Thr	Lys	Val	Ser	Ile	Gln	Phe	Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	440	445	450
Glu	Tyr	Thr	Pro	Asp	Pro	Asn	His	Gly	Phe	Tyr	Val	Ser	Pro	Ser	455	460	465

Val Leu Ser Ala	Leu Val Pro Ser Met	Val Ala Ala Lys Pro Val
470		475 480
Asp Trp Glu Glu	Ser Pro Leu Phe Asn	Ser Leu Phe Pro Val Ser
485		490 495
Asp Gly Ser Asn	Tyr Phe Val Arg Leu	Tyr Thr Glu Pro Leu Leu
500		505 510
Val Asn Leu Pro	Thr Pro Asp Phe Ser	Met Pro Tyr Asn Val Ile
515		520 525
Cys Leu Thr Cys	Thr Val Val Ala Val	Cys Tyr Gly Ser Phe Tyr
530		535 540
Asn Leu Leu Thr	Arg Thr Phe His Ile	Glu Glu Pro Arg Thr Gly
545		550 555
Gly Leu Ala Lys	Arg Leu Ala Asn Leu	Ile Arg Arg Ala Arg Gly
560		565 570
Val Pro Pro Leu		

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggtcct catggtgtct ctcggtcttg 50
 tgaccttggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttggccag ctgacaacgt acgctgcttc aagtcgcatc ctccccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
 gtgtccaggc tctctctcta ccagggtgtcc tcagaaatga tgctgggtcc 350
 tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
 gagacttgga atatggaaga agcaataccc aaccccacca aagaaaacct 450
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500
 gacccacagg acggtacttt cctctctac ctggtgctcc tcctaatgc 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat agagagcccc 600
 aagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag agaaactgg cctcaccaga tgctgaatct gctggtgcct 700
 tgatcttggg cttcccagcc tctagaactg taagaaataa atatttgctg 750
 tttataatcc aa 762

<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
 1 5 10 15
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
 20 25 30
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
 110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50
 ttctgtgccca ggaaccctga gcggtgagac tccagctgc ctacatcaag 100
 gccccaggac atgcagaacc ttctctaga acccgacca ccaccatgag 150
 gtcttgcttg tggagatgca ggcacctgag ccaaggcgtc cagtgtctct 200
 tgcttctggc tgtctggtc ttctttctct tcgcttgcc ctcttttatt 250
 aaggagctc aaacaaagcc ttccaggcat caacgcacag agaaccattaa 300
 agaaaggctc ctacagtccc tggcaaagcc taagtcccag gcacccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaacccagcc caaggccac accaccggag acagaggaaa 450
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 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
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 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttggtg 1150
 cagaaggctg tgacacgctt ccctccagtg ccccgacag agctgtctct 1200
 ggccagcctc ccgctggga gcctccggtg catcacctgt gccgtggtg 1250
 gcaacggggg catcctgaac aactccaca tgggccagga gatagacagt 1300
 cagcactacg tgttccgatt gagcggagct ctattaaaag gctacgaaca 1350
 ggatgtgggg actcggacat ccttctacgg ctttaccgcc ttctccctga 1400
 cccagtcact ctttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaagacgac tccgctaact gcaacttctg gaaggcacc cggactatga 1500
 gtggctggaa gcaactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctgggtcag gcacagaccc caggaagcctt ttccgggaagc cctgcacatg 1600
 gacagggtacc tgttgttgca ccagacttt ctccgataca tgaagaacag 1650
 gttttotgagg totaagaccc tggatgggtgc cactgggagg atataccgcc 1700
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 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
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 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
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 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
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 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

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Tyr Ala Glu Pro	Ala 80	Pro Glu Asn Asn 85	Ala Leu Asn Thr Gln Thr 90
Gln Pro Lys Ala	His 95	Thr Thr Gly Asp 100	Arg Gly Lys Glu Ala Asn 105
Gln Ala Pro Pro	Glu 110	Glu Gln Asp Lys 115	Val Pro His Thr Ala Gln 120
Arg Ala Ala Trp	Lys 125	Ser Pro Glu Lys 130	Glu Lys Thr Met Val Asn 135
Thr Leu Ser Pro	Arg 140	Gly Gln Asp Ala 145	Gly Met Ala Ser Gly Arg 150
Thr Glu Ala Gln	Ser 155	Trp Lys Ser Gln 160	Asp Thr Lys Thr Thr Gln 165
Gly Asn Gly Gly	Gln 170	Thr Arg Lys Leu 175	Thr Ala Ser Arg Thr Val 180
Ser Glu Lys His	Gln 185	Gly Lys Ala Ala 190	Thr Thr Ala Lys Thr Leu 195
Ile Pro Lys Ser	Gln 200	His Arg Met Leu 205	Ala Pro Thr Gly Ala Val 210
Ser Thr Arg Thr	Arg 215	Gln Lys Gly Val 220	Thr Thr Ala Val Ile Pro 225
Pro Lys Glu Lys	Lys 230	Pro Gln Ala Thr 235	Pro Pro Pro Ala Pro Phe 240
Gln Ser Pro Thr	Thr 245	Gln Arg Asn Gln 250	Arg Leu Lys Ala Ala Asn 255
Phe Lys Ser Glu	Pro 260	Arg Trp Asp Phe 265	Glu Lys Tyr Ser Phe 270
Glu Ile Gly Gly	Leu 275	Gln Thr Thr Cys 280	Pro Asp Ser Val Lys Ile 285
Lys Ala Ser Lys	Ser 290	Leu Trp Leu Gln 295	Lys Leu Phe Leu Pro Asn 300
Leu Thr Leu Phe	Leu 305	Asp Ser Arg His 310	Phe Asn Gln Ser Glu Trp 315
Asp Arg Leu Glu	His 320	Phe Ala Pro Pro 325	Phe Gly Phe Met Glu Leu 330
Asn Tyr Ser Leu	Val 335	Gln Lys Val Val 340	Thr Arg Phe Pro Pro Val 345
Pro Gln Gln Gln	Leu 350	Leu Leu Ala Ser 355	Leu Pro Ala Gly Ser Leu 360
Arg Cys Ile Thr	Cys 365	Ala Val Val Gly 370	Asn Gly Gly Ile Leu Asn 375
Asn Ser His Met	Gly 380	Gln Glu Ile Asp 385	Ser His Asp Tyr Val Phe 390

				380					385					390	
Arg	Leu	Ser	Gly	Ala 395	Leu	Ile	Lys	Gly	Tyr 400	Glu	Gln	Asp	Val	Gly 405	
Thr	Arg	Thr	Ser	Phe 410	Phe	Tyr	Gly	Phe	Thr	Ala 415	Phe	Ser	Leu	Thr	Gln 420
Ser	Leu	Leu	Ile	Leu 425	Gly	Asn	Arg	Gly	Phe 430	Lys	Asn	Val	Pro	Leu 435	
Gly	Lys	Asp	Val	Arg 440	Tyr	Leu	His	Phe	Leu 445	Glu	Gly	Thr	Arg	Asp 450	
Tyr	Glu	Trp	Leu	Glu 455	Ala	Leu	Leu	Met	Asn 460	Gln	Thr	Val	Met	Ser 465	
Lys	Asn	Leu	Phe	Trp 470	Phe	Arg	His	Arg	Pro 475	Gln	Glu	Ala	Phe	Arg 480	
Glu	Ala	Leu	His	Met 485	Asp	Arg	Tyr	Leu	Leu 490	Leu	His	Pro	Asp	Phe 495	
Leu	Arg	Tyr	Met	Lys 500	Asn	Arg	Phe	Leu	Arg 505	Ser	Lys	Thr	Leu	Asp 510	
Gly	Ala	His	Trp	Arg 515	Ile	Tyr	Arg	Pro	Thr 520	Thr	Gly	Ala	Leu	Leu 525	
Leu	Leu	Thr	Ala	Leu 530	Gln	Leu	Cys	Asp	Gln 535	Val	Ser	Ala	Tyr	Gly 540	
Phe	Ile	Thr	Glu	Gly 545	His	Glu	Arg	Phe	Ser 550	Asp	His	Tyr	Tyr	Asp 555	
Thr	Ser	Trp	Lys	Arg 560	Leu	Ile	Phe	Tyr	Ile 565	Asn	His	Asp	Phe	Lys 570	
Leu	Glu	Arg	Glu	Val 575	Trp	Lys	Arg	Leu	His 580	Asp	Glu	Gly	Ile	Ile 585	
Arg	Leu	Tyr	Gln	Arg 590	Pro	Gly	Pro	Gly	Thr 595	Ala	Lys	Ala	Lys	Asn 600	

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 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
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 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

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<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

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				20					25					30
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe
				35					40					45
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg
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Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln
				65					70					75
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala
				80					85					90
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys
				95					100					105
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln
				110					115					120
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile
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Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly
				140					145					150
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro
				155					160					165
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn
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185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

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caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
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cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
ccaccagcac caccatcctg catagtcacc acctgcagat atctagggcc 400
accctcagga agggagctgg agagaggcta tcggaagaac ccctgcaggt 450
cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500
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 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
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 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860	865			870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875	880			885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890	895			900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905	910			915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920	925			930
Val Trp Leu Gln	Ser Glu Lys Leu Glu Arg Met				
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<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

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<210> 355
 <211> 437
 <212> PRT
 <213> Homo sapiens

<400> 355
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 His Val Trp Lys Val Ser Asp Leu Pro Arg Gln Trp Thr Pro Lys
 35 40 45
 Asn Thr Ser Cys Asp Ser Gly Leu Gly Cys Gln Asp Thr Leu Met
 50 55 60
 Leu Ile Glu Ser Gly Pro Gln Val Ser Leu Val Leu Ser Lys Gly
 65 70 75
 Cys Thr Glu Ala Lys Asp Gln Glu Pro Arg Val Thr Glu His Arg
 80 85 90
 Met Gly Pro Gly Leu Ser Leu Ile Ser Tyr Thr Phe Val Cys Arg
 95 100 105
 Gln Glu Asp Phe Cys Asn Asn Leu Val Asn Ser Leu Pro Leu Trp
 110 115 120
 Ala Pro Gln Pro Pro Ala Asp Pro Gly Ser Leu Arg Cys Pro Val
 125 130 135
 Cys Leu Ser Met Glu Gly Cys Leu Glu Gly Thr Thr Glu Glu Ile
 140 145 150
 Cys Pro Lys Gly Thr Thr His Cys Tyr Asp Gly Leu Leu Arg Leu

<400> 356
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<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
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 20 25 30

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 cagagacctt tataagactc tctacggat gtgaatcaag agaacgtccc 600
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 cagggtgcga cgctcctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactccttct ccatcttttc tacctgaccc tgggtgtgaa 800
 actgcatagt gaatatcccc aacccaatg ggcattgact gtagaatacc 850
 cttaggttcc tgtagtgcc tacattaaat atataatgct tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
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 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
 20 25 30
 Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
 35 40 45
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
 50 55 60
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
 65 70 75
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
 80 85 90
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
 95 100 105
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
 110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

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agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtgagagc catgagctgc gtccctgggtg gtgtcatccc ctgggggctg 250
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tccgcagagc catccccagg gaggacaagg aggagatcct catgtgcac 400
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
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 cactgccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
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 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
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<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
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 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
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gcagctcaca tggaaacaggc cggggtatga ctttgcaact gaagctgaag 150
gagtcctttc tgacaaattc ctccatgatg tccagcttcc tgggaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcagggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgcctctctt ggcccgggct tttgggcccgg ggatgcagga 350
ggcaggcccc gacctgtct ttcagcaggc ccccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
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acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttcccctccc ctccgattgt tctaaataat tgaagatgt ctgctgtgga 350
aaaaggcatg tatttaaadc tgatgatgc tcaaccatct ttagtgtgga 400
aaggctcctg aaagccaatg gaaataacttt tttttttctt tggcactaat 450

aaaagatccg gactctgctg aatgcaagct gtgacaacat gotgatgggc 550
 ataaagtctt tgaataatg gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgttttg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac tttctggca 750
 gggaacaggc caagtgatct acaaaggttt tctatttttt cataaccaag 800
 caactttota tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgetcccagg aggggtaggc cgagcattgg ttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct cacaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
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 ctgggcacta tcagttagga ggaactgccc aactgtttct tccccagag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
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 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gactgtggc 1350
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 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
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 gtcaatgcgt tcatcgttcc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tctccagaa aaccagtcta aggggtgagga ccccaactct agcctcctct 2400
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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

Met	Met	Val	Ala	Leu	Arg	Gly	Ala	Ser	Ala	Leu	Leu	Val	Leu	Phe
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Leu	Ala	Ala	Phe	Leu	Pro	Pro	Pro	Gln	Cys	Thr	Gln	Asp	Pro	Ala
				20					25					30
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly
				35					40					45
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe
				50					55					60
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln
				65					70					75
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu
				80					85					90
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu
				95					100					105
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala
				110					115					120
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr
				125					130					135
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser
				140					145					150
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met
				155					160					165
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly
				170					175					180
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe
				185					190					195
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr
				200					205					210

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu
				215					220					225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn
				230					235					240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly
				245					250					255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile
				260					265					270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly
				275					280					285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
				290					295					300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln
				305					310					315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val
				320					325					330
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr
				335					340					345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe
				350					355					360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro
				365					370					375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile
				380					385					390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys			
				395					400					

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
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 ctggccctga tggcgacgac gccggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc ccgcctgccca aaaagcaaat ggatttcac 200
 ctgacaaatc ttgcgggatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tgggtgcagc 300
 totgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaaatcct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag cctgactgc agagccttca 500
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cgggagagtg ggggctacac cttcacagcc accccagagg acttccctaa 600
aaagcacaag gcgcctgtca tcgacattgg cattgctaac acaggggaagt 650
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ggtcaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750
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atgtgaaggt ttgggaagtc tgccttggaa agaaggggga gttccaggag 850
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu
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Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly
				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly Arg Phe Val Ala Ser Cys Gly Phe Thr Pro Asp Val Lys Val
 245 250 255
 Trp Glu Val Cys Phe Gly Lys Lys Gly Glu Phe Gln Glu Val Val
 260 265 270
 Arg Ala Phe Glu Leu Lys Gly His Ser Ala Ala Val His Ser Phe
 275 280 285
 Ala Phe Ser Asn Asp Ser Arg Arg Met Ala Ser Val Ser Lys Asp
 290 295 300
 Gly Thr Trp Lys Leu Trp Asp Thr Asp Val Glu Tyr Lys Lys Lys
 305 310 315
 Gln Asp Pro Tyr Leu Leu Lys Thr Gly Arg Phe Glu Glu Ala Ala
 320 325 330
 Gly Ala Ala Pro Cys Arg Leu Ala Leu Ser Pro Asn Ala Gln Val
 335 340 345
 Leu Ala Leu Ala Ser Gly Ser Ser Ile His Leu Tyr Asn Thr Arg
 350 355 360
 Arg Gly Glu Lys Glu Glu Cys Phe Glu Arg Val His Gly Glu Cys
 365 370 375
 Ile Ala Asn Leu Ser Phe Asp Ile Thr Gly Arg Phe Leu Ala Ser
 380 385 390
 Cys Gly Asp Arg Ala Val Arg Leu Phe His Asn Thr Pro Gly His
 395 400 405
 Arg Ala Met Val Glu Glu Met Gln Gly His Leu Lys Arg Ala Ser
 410 415 420
 Asn Glu Ser Thr Arg Gln Arg Leu Gln Gln Gln Leu Thr Gln Ala
 425 430 435
 Gln Glu Thr Leu Lys Ser Leu Gly Ala Leu Lys Lys
 440 445

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
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 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
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 aggaacgcga agcaccacac ctgtccttgc ttgcccaacc tgctgtgtc 350
 caggttcccc gacgcgaggt accgctgtc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttcctgag 450
 cacagcctgg atttttatatt ctgccatgaa acccagctcc catgactctc 500
 ccagtcctca cactgactac cctgatctct cttgtctagt acgcacatat 550
 gcacacagcg agacatacct cccatcatga catggtcccc aggctggcct 600
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 ttgggtgcat tgctcagagt cccaggtcct ggctgaacc caggccctt 850
 cacgtgaggt ctgtgaggac caatttggtg gtagtctatc ttcctcgat 900
 tggttaactc cttagtcca gaccacagac tcaagattgg ctctccacag 950
 agggcagcag acagtacccc caaggcaggt gtaggagacc cagggagcc 1000
 aatcagcccc ctgaagactc tgggtccagt cagcctgtgg cttgtggcct 1050
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 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
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 agaaggaat taggggtgtt ccttaaaaca ctcctttcca aggatcagcc 1250
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 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
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<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
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 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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cattggtgca ggagccctgg gggctgctgc ctggcattg ctgcttgcca 150
acacagacgt gtttctgtcc aagcccaga aagcgccct ggagtacctg 200
gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
caggctgttt cctctgtoga gaggaagctg cggatctgtc ctccctgaaa 350
agcatgttgg accagctggg cgtcccccct tatgcagtgg taaaggagca 400
catcaggact gaagtgaagg atttccagcc ttatttcaa ggagaaatct 450
tctctgatga aaagaaaaag ttctatggtc cacaaggcgg gaagatgatg 500
tttatgggat ttatcgtct gggagtgtgg tacaacttct tccgagcctg 550
gaacggaggc ttctctgaa acctggaagg agaaggcttc atccttgggg 600
gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcacoga 650
gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaaagtgc 700
taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgatttgtgtg 750
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tgtattgttt ccaactgtgt cctaaggag tgagaaaccc atttatactc 850
tactctcagt atggattatt aatgtatctt aatatctgt ttaggcccac 900
taaggcaaaa tagcccaaa acaagactga caaaaactctg aaaaaactaat 950
gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
caggctgggt gcagtggctc acacctgtaa tccagcact ttgggaggcc 1050
aaggtgagca agtcaactga ggtcgggagt tcgagaccag cctgagcaac 1100
atgvcgaaac ccgtctcta ctaaaaatac aaaaatcacc cgggtgtggt 1150
ggcaggcacc tgtagtccca gctacccggg aggtcagggc aggagaatca 1200
cttgaacctg ggaggtggag gttgcgttga gctgagatca caccactgta 1250
ttccagcctg ggtgactgag actctaacta a 1281

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<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

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Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp
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Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Leu Ala Leu Leu
          20          25          30

Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
          35          40          45

Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
          50          55          60

Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
          65          70          75

Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
          80          85          90

Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
          95          100          105

Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
          110          115          120

Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
          125          130          135

Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
          140          145          150

Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
          155          160          165

Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
          170          175          180

Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
          185          190          195

Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
          200          205          210

Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
          215          220          225

Ser Glu Lys Lys
  
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<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

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caaagacgcc cgggccaggt gcccgcgc aggtgccccc ggccggagat 100
  
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gccaccacgc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggcgc agcctggggg caaatacaga 250
ccactttctgc aaatgagaat agcactgttt tgccttcctc caccagctcc 300
agctccgatg gaaacctgcg tccggaagcc atcactgcta tcatcggtgt 350
cttctccctc ttggctgctt tgctcctggc tgtggggctg gcaactgttg 400
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agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccct ctagggtccc tctcctgcat 550
ctgtctccct tcattgctgt gtgaccttgg ggaaggcag tgcctctctc 600
gggcagtcag atccaccacg tgcttaatat cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
<211> 123
<212> PRT
<213> Homo sapiens

<400> 375
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Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
20 25 30
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
35 40 45
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
50 55 60
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Ala Val Gly
65 70 75
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
80 85 90
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
95 100 105
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
110 115 120
Leu Pro Ile

<210> 376
<211> 713
<212> DNA
<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcagggaagc aacacattgg agaattggcta ctttctatca agaaaataag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga ggggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatcctctg catatataca ataagggtgaa 450
attataagta cccatgcag ttggctggac agttctaata tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
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aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
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cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
 tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt tcaaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
 actccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaggcga atacattcac ttcacccctg acctctactc tggaaaaaaa 450
 caaaatgaat atggaccacc aggcaaaactg tttgtccatg agtgggctca 500
 cctccgttgg ggagtgttg atgagtacaa tgaagatcag cctttctacc 550
 gtgctaagtc aaaaaaaato gaagcaacaa ggtgttccgc aggtatctct 600
 ggtagaataa gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
 ttctcgataa agtacaacaa gaaaaagcat ccataatgtt tatgcaaagt 750
 attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850
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 aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
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 cccaatgatt gtttacgcag aaattctaca aggatattgta cctgttcttg 1900
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<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

	275		280		285
Ile Pro Met Val Thr	290	Pro Pro Pro Pro	Pro Val Phe Ser Leu	Leu	300
Lys Ile Ser Gln Arg	305	Ile Val Cys Leu	Val Leu Asp Lys Ser	Gly	315
Ser Met Gly Gly Lys	320	Asp Arg Leu Asn	Arg Met Asn Gln Ala	Ala	330
Lys His Phe Leu Leu	335	Gln Thr Val Glu	Asn Gly Ser Trp Val	Gly	345
Met Val His Phe Asp	350	Ser Thr Ala Thr	Ile Val Asn Lys Leu	Ile	360
Gln Ile Lys Ser Ser	365	Asp Glu Arg Asn	Thr Leu Met Ala Gly	Leu	375
Pro Thr Tyr Pro Leu	380	Gly Gly Thr Ser	Ile Cys Ser Gly Ile	Lys	390
Tyr Ala Phe Gln Val	395	Ile Gly Glu Leu	His Ser Gln Leu Asp	Gly	405
Ser Glu Val Leu Leu	410	Leu Thr Asp Gly	Glu Asp Asn Thr Ala	Ser	420
Ser Cys Ile Asp Glu	425	Val Lys Gln Ser	Gly Ala Ile Val His	Phe	435
Ile Ala Leu Gly Arg	440	Ala Ala Asp Glu	Ala Val Ile Glu Met	Ser	450
Lys Ile Thr Gly Gly	455	Ser His Phe Tyr	Val Ser Asp Glu Ala	Gln	465
Asn Asn Gly Leu Ile	470	Asp Ala Phe Gly	Ala Leu Thr Ser Gly	Asn	480
Thr Asp Leu Ser Gln	485	Lys Ser Leu Gln	Leu Glu Ser Lys Gly	Leu	495
Thr Leu Asn Ser Asn	500	Ala Trp Met Asn	Asp Thr Val Ile Ile	Asp	510
Ser Thr Val Gly Lys	515	Asp Thr Phe Phe	Leu Ile Thr Trp Asn	Ser	525
Leu Pro Pro Ser Ile	530	Ser Leu Trp Asp	Pro Ser Gly Thr Ile	Met	540
Glu Asn Phe Thr Val	545	Asp Ala Thr Ser	Lys Met Ala Tyr Leu	Ser	555
Ile Pro Gly Thr Ala	560	Lys Val Gly Thr	Trp Ala Tyr Asn Leu	Gln	570
Ala Lys Ala Asn Pro	575	Glu Thr Leu Thr	Ile Thr Val Thr Ser	Arg	585
Ala Ala Asn Ser Ser		Val Pro Pro Ile	Thr Val Asn Ala Lys	Met	

					590					595					600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	
				605					610					615	
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	
				620					625					630	
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	
				635					640					645	
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	
				650					655					660	
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	
				665					670					675	
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	
				680					685					690	
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	
				695					700					705	
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	
				710					715					720	
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	
				725					730					735	
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	
				740					745					750	
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	
				755					760					765	
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	
				770					775					780	
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	
				785					790					795	
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	
				800					805					810	
Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	
				815					820					825	
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His	
				830					835					840	
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser	
				845					850					855	
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala	
				860					865					870	
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro	
				875					880					885	
Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu	
				890					895					900	
Val	Leu	Ser	Val	Ile	Gly	Ser	Val	Val	Ile	Val	Asn	Phe	Ile	Leu	

Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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 gaccagagg agcaatgatg tagccacctc ctaaccttec cttcttgaa 200
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
 gtcctctcg ctttaacttg ggttgaggga gagaacctt gtggggctgc 300
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 ccaagaggca gaactcgtc tagaaggaaa tggatgcaag cagctccggg 550
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 ggggcccggt ctttgaggga tgccacoggt tctggagca tggctgatc 650
 ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tccgggttg 700
 tggttttgct ggtgctctc tgcgtgtgcta tctctgtcct gtacatgtt 750
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 accccaggga gaagcctgtg aggaaggaca agcgggatga gttggtgaa 1200
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 caatcacggt ccttacacgg cctctgattt catagaaggg atctaccgaa 1300

cagaagggga caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350
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 gaaagtga aaatgaaagc tcaacatggc caacacgctt atcaatgtta 1450
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 ccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
 ctgtctccgt tttttctttt tatttaaaaa tgcacttttt ttcccttgtg 2900

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
				410					415					420	
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
				425					430					435	
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
				515					520					525	
Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaaggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtagc aatcctggca taatatacgg ccacatgat gcagtc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcc a ttcagtctga 50
actctgtcaa ccagggtcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaa cgtggttagc tttctccatg agaaaagttc ccaacagaga 200
agcaacagaa atttcccatg tctactttg caatgtaacc cagaggggat 250
cattctggtt tgtggttaca gacccttcaa aaaatcacac ctttctgct 300
gttgagggtc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttctttcta atgaccaa ctctggaatt tttaaaaatc ctttccacac 400
ttgcaccacc catggacc ca tctgtgccca tctggattat tatatttggt 450
gtgatatttt gcatcatcat agttgcaatt gcaactactg tttatcagg 500
gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcaaa ttgaaaatgc catccctct 600
gatccctggg acatgaaggg gggcatatta atgatgcctt catgacagag 650
gatgagaggg tcacccctct ctgaagggtt gttgttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tttttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgtctgaa agtgaaaagc aatcaattat accaccaacc accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatatt tctgacagta 900
tagtgtataa atgtggtcat gtggtatttg tagttattga ttttaagcatt 950
tttagaaaa agatcaggca tatgtatata ttttcacact tcaaaagcct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata ttttttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
 agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 387
 Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu
 1 5 10 15
 Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
 20 25 30
 Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
 35 40 45
 Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
 50 55 60
 Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
 65 70 75
 Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
 80 85 90
 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
 95 100 105
 Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
 110 115 120
 Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
 125 130 135
 Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
 140 145 150
 Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
 155 160 165
 Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
 170 175 180
 Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
 185 190 195
 Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
 200 205 210

Pro Ser

<210> 388
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 388
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ggccttggca ggggtgttga gccctcggtc tgcccctgcc ggtctctggg 100
gccaaagctg ggtttccctc atgtatggca agagctctac tegtgcggtg 150
cttcttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
ggaaatttat acctcccggg tgctggaggc tgtaaatggg acagatgctc 250
gggtaaaatg cactttctcc agctttgcc ctgtgggtga tgctctaaca 300
gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgatt 350
ctactaccac atagatccct tccaacccat gagtgggcgg ttaaggacc 400
gggtgtcttg gtaggggaat cctgagcggg acgatgcctc catcctctc 450
tggaactcgc agttcgacga caatgggaca tacacctgcc agtggaagaa 500
cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
acactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
gcctgtgcac tgatgatcat aatagtaatt gtagtggtcc tcttcacga 650
ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
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tttccagtgt tgaccggtt tccaaccagt tctgcagcat attagattct 900
agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
gtcatacaca gctcattat taaggtctta tttaatttca gagtgtaaat 1000
tttttcaagt gctcattag tttataaac aagaagctac atttttgccc 1050
ttaagacact acttacagt ttatgacttg tatacacata tattggatc 1100
aaaggggata aaagccaatt tgtctgttac atttcttctc acgtatttct 1150
tttagacga cttctgttac taaagttaat gtgtttactc tcttctctc 1200
ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
acagtaaact ctaaaattca actgttaaat gacattttta tttttatgtc 1300
tctccttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350
ccaggtgata gatttttctc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Leu	Gly
1				5					10					15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gagg 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagg 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
 agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa cactgcgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tctgtgatt toatccaact acttaccttg cctacgatat 400
 ccctttatc tctaatacgt ttattttctt tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Gly Val Ser Ile Phe
 1 5 10
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Thr Thr Thr Ala Thr Thr Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe

<400> 395
 gctccctgat cttcatgtca ccacc 25

<210> 396
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 396
 cagggaacaca ctctaccatt cgggag 26

<210> 397
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 397
 ccattcttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
 <211> 907
 <212> DNA
 <213> Homo sapiens

<400> 398
 ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggttc 50
 aaccttgagc ccctaggggt ctggatttgc tggtaacaa gataacctga 100
 gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
 gtgttcacgg tggcctgggc cctccttgcc gagagagtgt cctgggtcag 200
 ggacgcagag gacgctcaca gactccagcc cttgtttacc gagaggacac 250
 ttggcaaggt ccagcgatgg tccggagtc acacacagac tggcggcagg 300
 gcaggagggg gacagttctg ttgtgcttgg ttggacagta agagggtctt 350
 ggccagtgcca ggggtggggg cggcaaaact cataaagaac cacagggtct 400
 gggcccccgc cacagagtca tctgccagc tctctgctg ctggccagtg 450
 ggagtgacc gaggtggggc tttgtccag taaaaccaca ggctggattt 500
 gcctgcgggc catggtcct gtctagggca gcaattctca acctctttgc 550
 tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
 agcaattaaa actgagaaat gggccgggca cgggtggctca cgctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaacccagg aggcggagct tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala 15
 1 5 10
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu 30
 20 25
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly 45
 35 40
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg 60
 50 55
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg 75
 65 70
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn 90
 80 85
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu 105
 95 100
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln 120
 110 115

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
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 ccggcctgcc tcagcggccc coactggcgg cccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccagggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 gggggccgga tgcagcccag gaactctggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggtg gcccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta cggagaattt 450
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 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgcgtcaaagg aacacttcca 650
 cgccccgtga ggccccctgtg cagggaggag ctgcctgttc actgggatca 700
 gccagggcgc cgggcccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtacc tttcatgcct acacaccct cattaagca gattcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
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 tgtaatttgc atcctgggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaactctg agtgagagac 150
 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtcaa 200
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 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttgttg acgtcaacgg aatcgctatc tccttctcca actgggaccg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggto tttctccaat gtgtectcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc ttgggattt 800
 tgccotttct ggggtatagg ggcacagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttct 900
 tcacttgtac aaacocagtt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttcoctacat cagagactct 1050
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 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acatttattt tgcttttagca tccttactct caccttttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtataattat 1500
 tttttttagc catcattata tgtttaagtc tattatgggc aaccaatcct 1550
 tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatac 1600
 gtctgtgcaa ttttttatc tgcctagtgc tattctgctt gtttaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 cttcaataaa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagtctgtt 1850
 tcattgtctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165
Ala	Gln	Pro	Asn	Gly	Gly
				Lys	Arg
				Glu	Asn
				Cys	Val
				Leu	Phe
				Ser	
				170	175
Gln	Ser	Ala	Gln	Gly	Lys
				Trp	Ser
				Asp	Glu
				Ala	Cys
				Arg	Ser
				Ser	
				185	190
Lys	Arg	Tyr	Ile	Cys	Glu
				Phe	Thr
				Ile	Pro
				Lys	
				200	205

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctggttatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc etc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 gcacctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gctctgtggc ettgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgtctt cttagtgggc 150
 tcggccaagc ctgtggccca gctgtctgct gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaacccctc cggcaccctc aacctcctga 250
 agctctctgt gagcagcctg ggcacccccc tgaaccacct catagagggc 300
 tcccagaagt gtgtgggtga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcacc tacacctgag gacaagacgc tgcccacccg cgagggtga 450
 aaaccccgcc gcggggagga ccgtccatcc ccttcccccg gccccctetca 500
 ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
 1 5 10 15
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
 tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
 aaggaggcca ctccctggcc tcgcagccg atcacatgaa ggtggtgcca 100
 agtctcctgc tctccgtcct cctggcacag gtgtggcttg taccggctt 150
 ggcccccagt cctcagtcgc cagagacccc agcccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagctt gccaaaggaga cttcaaaact cggtattcag ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttgcatg 400
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtccc acttgcaggc cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggaactca gagagacact cccccgaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcaccc acaaggattt 600
 tgatgtcaaa gagaactttct tcaattttatc caagaggat tttgatacag 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattot tgtggattac atcttgttca 800
 aagggaatg gttgaccca tttgacctg tcttcacoga agtcgacact 850
 ttccacotgg acaagtacaa gaccattaag gtgcccatga tgaacgtgc 900
 aggcaagtgt gcctccacct ttgacaagaa tttctgtgt catgtcctca 950
 aactgcctca ccaaggaaat gccaccatgc tgggtgtct catggagaaa 1000
 atgggtgacc acctcgcct tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaccatga aaaccagaaa catggaagt ttctttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaatcttctc accctttgct gacctagtgt aactctcagc 1200
 tactggaaga aatctccaag tatccagggt tttacgaaga acagtgtatt 1250
 aagttgatga aaggggcaact gaggcagtgg cagggaatct gtcagaaatt 1300
 actgcttatt ccatgcctcc tgctcatcaa gtggaccggc catttcattt 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcaggggtg 1400
 tgaatccgac tctctataa ttcaggacat gcataagcac ttcgtgtgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc ttttgttctt aactagtta ggggtgtctc 1550
 aaataaatac agtagtccc acttatctga gggggataca ttcaaagacc 1600
 ccagcagat gcctgaaacg gtggacagt ctgaacctta tatatattt 1650
 ttctacaca tacataccta tgataaagt taattataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaa 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtactca tggcgaggga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 ccactactc agaatggcat gctgcttaag acttttagat tgtttattt 1950
 tggaattttt catttaattg ttttgacca tggttgacca tggtaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact aaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
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 cccagacatg aggaggctcc tccctggtcac cagcctggtg gttgtgctgc 100
 tgtggggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgccc 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttcctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccctccagg caccaaggcc tggatggaga ccgaggacac 350
 cctggggcgt gtccctgagtc ccgagcccca ccatgacacg ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc tacctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15

Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30

Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45

Gly Ala Arg Val Glu Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60

Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150

tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200

gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtctca 250

gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300

cagaccttct gtgacatgac ctctgggggt ggcggctgga cctgtgtggc 350

cagcgtgcat gagaatgaca tgcgtgggaa gtgcacgggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaagtgtt 700
 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgaagcc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggatgta acactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt ccccgagcgt gtggagattt 950
 ttctggtttt gattggagtg gatatggaac tcatgttgtt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtggggagg aaccagacc tctcctocca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 414
 Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
 1 5 10 15
 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
 20 25 30
 Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
 35 40 45
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
 50 55 60
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
 65 70 75
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
 80 85 90
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
 95 100 105
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
 110 115 120
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	
245	250	255
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu	Leu Phe Tyr Arg	
305	310	

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgcctctcgcc gccgccacct 50
 cggtggtggg cccacgaggc tgccgcaccc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tccctggggc gctgcagggtg 150
 ctacgcgtgc tggggggcgc coatgaaagc gcagccatgg cggcacatgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccacattc agttgcctca gactccagta atacaacggt 350
 caccacatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
ctatgcatto tgaagcaaag aaaggatcaa aatttgatgc tgggagcttt 600
gttggtggta ttgtattaac gctgggagtt ttatctattc ttacattgg 650
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750
attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800
tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
gttcatagta agacaaacaa gtcctatctt tttttttgg ctgggggtggg 1000
ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
agaatgccat ctgggcatac aaataagaag ttgtcacag cactcaggat 1100
tttgggtatc tttttagct cacataaaga acttcagtgc ttttcagagc 1150
tggatatatc ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416
<211> 208
<212> PRT
<213> Homo sapiens

<400> 416
Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly 15
1 5 10
Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala 30
20 25
Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His 45
35 40
Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser 60
50 55
Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr 75
65 70
Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys 90
80 85
Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr 105
95 100
Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser 120
110 115
Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala	Ala Ser Ser Val Thr Ile	
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys	Lys Gly Ser Lys Phe Asp	
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val	Leu Thr Leu Gly Val Leu	
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg Gly	
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His	Asp Ala Ile Ile	
200	205	

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

cagccggggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccca 50

gcggggagacc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100

gcgatggcga cctgtggggg aggccttctt cggcttggtc ccttgctcag 150

cctgtctgct ctggcgcttt cctgtctgct gctggcgcac ctgtcagacg 200

ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccctccctat 250

aaagaaaatt ctgggcatac ttataataag aacatatctc agaaagattg 300

tgattgcctt catgttgttg agcccatgcc tgtcgggggg cctgatgtag 350

aagcatactg tctacgtgtg gaatgcaaat atgaagaaag aagctctgtc 400

acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450

tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500

tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550

cagccttttg caaatgcaca cgtatgtgcta gcccgctccc gcagctcgagc 600

caacgtgctg aacaaggtag aatatgcaca gcacgcctgg aagcttcaag 650

tccaagacca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700

ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750

agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800

ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850

ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900

aaagtgcagc aataagtctt ttccattttg tgacttttac taataaaaaa 950

aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 ttgtgtgttg ttgttttttg ttgtttgtt ttggtgggag agggggaggga 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
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 tgtgatgtct gatgcaatgc atctagaac aaactggcca ttgctagtt 1400
 tactctaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggtcgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtctg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattatttg ataactggtt tttttcttcc tatgtctctt ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
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 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
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 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
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<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
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aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggagtgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggaagaata tgtgtctatac 300
tattactcca atctcagtgt gcctattggg cgttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagagggc tgaccagga acctatatct gtgaaatccg cctcaaaggg 450
gagagccaggc tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
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ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatat 600
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tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtggagg agtcagatgg aggaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccatttgtct gcatgtcagc ccggaagagc 850
ctcgaaact ggtgaccccg gcagccctga ggcctctggt cttgggtggt 900
aatcagtttg tgatcattgt gggaattgtc tgtgccacaa tctgctgct 950
cctgtttctg atattgatcg tgaagaagac ctgtggaat aagagttcag 1000

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 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
 ctcccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaaa 1150
 aatcagaggc cacctacatg accatgcacc cagtttgccc ttctctgagg 1200
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 ggtggagact ctctctctgt tgtgtcctgg gccactctac cagtgtattc 1350
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 acactggccc tgggaaccag gctgagctga gtggcctcaa acccccggtt 1550
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 gaatcagaga taaaaaccaa cccaaatcaa 1630

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<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

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Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	20	25	30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	35	40	45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	50	55	60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	65	70	75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	80	85	90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	95	100	105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	110	115	120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	125	130	135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	140	145	150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val				

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 cctgcacctt cctcctggtg gcgtgtgatg gctttgattc tgctgaccc 300
 gtgcgtgggg atggttgctg ggctgggtgc tctggggatt tggctctgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatogcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtgttaaaac aatcagaact 450
 aaagggcact ttcaaaggtc ataaatgcag ccctgtgac aaaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggacaaa cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatgtgtt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaaac caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aagggtgacc aactacctta atgcaaagag gtggacagga taacacagat 900
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 aaaaaaaaaa aaa 963

<210> 424
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 <212> PRT
 <213> Homo sapiens

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 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

125	130	135
Thr Leu Leu Lys Ile Asp Asn Arg Asn Ile Val Glu Tyr Ile Lys		
140	145	150
Ala Arg Thr His Leu Ile Arg Trp Val Gly Leu Ser Arg Gln Lys		
155	160	165
Ser Asn Glu Val Trp Lys Trp Glu Asp Gly Ser Val Ile Ser Glu		
170	175	180
Asn Met Phe Glu Phe Leu Glu Asp Gly Lys Gly Asn Met Asn Cys		
185	190	195
Ala Tyr Phe His Asn Gly Lys Met His Pro Thr Phe Cys Glu Asn		
200	205	210
Lys His Tyr Leu Met Cys Glu Arg Lys Ala Gly Met Thr Lys Val		
215	220	225
Asp Gln Leu Pro		

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 <212> DNA
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<220>
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<400> 426
 ctgagataac cgagccatcc tccac 26

<210> 427
 <211> 49
 <212> DNA
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<220>
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<210> 428
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<220>
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gactgccctc cctgccca 17

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caaaaagcct ggaagtcttc aaag 24

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<210> 433
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<210> 434
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cctttctgta taggtgatac ccaatga 27

<210> 436
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<220>
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<400> 436
tgcccatccc taccagaggc aaaa 24

<210> 437
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ctgaagacga cgcggattac ta 22

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ggcagaaatg ggaggcaga 19

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<210> 441
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<210> 442
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<400> 443
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<210> 444
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<220>
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<400> 444
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<212> DNA
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<220>
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tcagtggccc taaggagatg ggcct 25

<210> 446
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 <210> 449
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 <400> 449
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 <210> 450
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 <400> 450
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 <210> 451
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<400> 452
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<210> 453
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<220>
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tgcacctaga tgtccccagc accc 24

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<400> 458
aagatgcgcc aggcttctta 20

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<220>
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<210> 463
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<212> DNA
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<220>
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<400> 468
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 <210> 470
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 <210> 471
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 <210> 474
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<400> 474
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<210> 475
<211> 20
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<220>
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<210> 477
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<220>
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cctgagagca agaaggttga gaat 24

<210> 478
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<400> 478
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<220>
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 <210> 481
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 <210> 482
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 <210> 483
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 <400> 483
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 <210> 484
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 acagatccag gagagactcc aca 23

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 <210> 488
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 <400> 489
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 <210> 490
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 <220>
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 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggcctga cagtgtt 17

DEPARTMENT OF THE ARMY

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<400> 492
ctgagccgag actggagcat ctacac 26
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<220>
<223> Synthetic oligonucleotide probe

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<211> 1231
<212> DNA
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gagccccctc	cttttgtgaa	gcccgagtgc	ggagaagccc	gggcaaagc	200
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tgggtgtggg	cgctcgtggc	atggcggcgg	ctatcgccag	ctcgctctac	350
cgtcagaaga	gcgaagcccg	cga gcgcgag	aaatccaacg	cctgcaagtg	400
tgtcagcagc	cccagcaaa	gcaagaccag	ctgcgacaaa	aacaagttaa	450
atgtcttttc	ccgggtcaaa	ctcttcggct	ccaagaagag	gcgcagaaga	500
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gtggtggcta	tcaaaggagt	tcaaaccaag	ctgtacttgg	caatgaacag	700
tgagggtatac	ttgtacacct	cggaaactttt	cacacctgag	tgcaaattca	750
aagaatcagt	gtttgaaaaa	tattatgtga	catattctac	aatgatatac	800
cgtcagcagc	agtcaggccg	agggtggtat	ctgggtctga	acaaagaagg	850
agagatcatg	aaaggcaacc	atgtgaagaa	gaacaagcct	gcagctcatt	900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgtagcc agtgagggca aaagaagggc tctgtaacag aacottacct 1100
ccagggtgct ttgaattctt ctacgagtc ttcacccaaa agttcaaatt 1150
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cattagacct tcttatcatc catactaaag c 1231

<210> 495
<211> 245
<212> PRT
<213> Homo Sapien

<400> 495
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Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser 30
20 25
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val 45
35 40
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg 60
50 55
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser 75
65 70
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp 90
80 85
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile 105
95 100
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys 120
110 115
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu 135
125 130
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn 150
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Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser 165
155 160
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met 180
170 175
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu 195
185 190
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His 210
200 205
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

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<210> 496

<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
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Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro
			50						55				60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
			65						70				75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
			80						85				90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
			95						100				105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
			110						115				120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
			125						130				135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
			140						145				150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
			155						160				165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
			170						175				180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
			185						190				195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
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<211> 744

<212> DNA
<213> Homo Sapien

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gtgcgcatct tcggcctcaa gaagcgagc ttgcggcgcc aagatcccca 200
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<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
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35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
 125 130 135
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
 140 145 150
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
 155 160 165
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
 170 175 180
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
 185 190 195
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
 200 205 210
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
 215 220 225
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
 230 235 240
 Val Asn Lys Ser Lys Thr Thr
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<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
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<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
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 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
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Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
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 <211> 2458
 <212> DNA
 <213> Homo Sapien

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<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
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 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly
230 235 240

Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu
245 250 255

Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Arg Pro
260 270

Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val
275 280 285

Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly
290 295 300

Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln
305 310 315

Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr
320 325 330

Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro
335 340 345

Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro
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Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val
365 370

<210> 504
<211> 3060
<212> DNA
<213> Homo Sapien

<400> 504
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ctcctgtgcg gaggtagtga ttctgcaga agtttgagta tcaactactoc 150
tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
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<210> 505
 <211> 352
 <212> PRT
 <213> Homo Sapien

<400> 505
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 Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
 35 40 45
 Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
 50 55 60
 Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
 65 70 75
 Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
 80 85 90
 Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
 95 100 105
 Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
 110 115 120
 Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

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Ser	Glu	Glu	Ile	Gly 155	Ser	Asp	Phe	Lys	Ile 160	Lys	Cys	Glu	Pro	Lys 165
Glu	Gly	Ser	Leu	Pro 170	Leu	Gln	Tyr	Glu	Trp 175	Gln	Lys	Leu	Ser	Asp 180
Ser	Gln	Lys	Met	Pro 185	Thr	Ser	Trp	Leu	Ala 190	Glu	Met	Thr	Ser	Ser 195
Val	Ile	Ser	Val	Lys 200	Asn	Ala	Ser	Ser	Glu 205	Tyr	Ser	Gly	Thr	Tyr 210
Ser	Cys	Thr	Val	Arg 215	Asn	Arg	Val	Gly	Ser 220	Asp	Gln	Cys	Leu	Leu 225
Arg	Leu	Asn	Val	Val 230	Pro	Pro	Ser	Asn	Lys 235	Ala	Gly	Leu	Ile	Ala 240
Gly	Ala	Ile	Ile	Gly 245	Thr	Leu	Leu	Ala	Leu 250	Ala	Leu	Ile	Gly	Leu 255
Ile	Ile	Phe	Cys	Cys 260	Arg	Lys	Lys	Arg	Arg 265	Glu	Glu	Lys	Tyr	Glu 270
Lys	Glu	Val	His	His 275	Asp	Ile	Arg	Glu	Asp 280	Val	Pro	Pro	Pro	Lys 285
Ser	Arg	Thr	Ser	Thr 290	Ala	Arg	Ser	Tyr	Ile 295	Gly	Ser	Asn	His	Ser 300
Ser	Leu	Gly	Ser	Met 305	Ser	Pro	Ser	Asn	Met 310	Glu	Gly	Tyr	Ser	Lys 315
Thr	Gln	Tyr	Asn	Gln 320	Val	Pro	Ser	Glu	Asp 325	Phe	Glu	Arg	Thr	Pro 330
Gln	Ser	Pro	Thr	Leu 335	Pro	Pro	Ala	Lys	Phe 340	Lys	Tyr	Pro	Tyr	Lys 345
Thr	Asp	Gly	Ile	Thr 350	Val	Val								

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<211> 1705
<212> DNA
<213> Homo Sapien
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	cctgctgctc	ccaggcagcc	agcctcaag	catcacttac	aggaccagag	150
	ggacaagaca	tgactgtgat	gaggagctgc	tttcgccaat	ttaacaccaa	200
	gaagaattga	ggctgcttgg	gaggaaggcc	aggaggaaca	cgagactgag	250

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<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

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20 25 30
Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln
35 40 45
Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln
50 55 60
Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala
65 70 75
Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg
80 85 90
Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser
95 100 105
Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val
110 115 120
Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys
125 130 135
Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln
140 145 150
Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser
155 160 165
Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu
170 175 180
Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile
185 190 195
Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu
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<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgtctgc gtgaccaaga acctcctggc gttctactgt gacagggtgt 300

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<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

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<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
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 35 40 45
 Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His
 50 55 60
 Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile
 65 70 75
 Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser
 80 85 90
 Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser
 95 100 105
 His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu
 110 115 120
 Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu
 125 130 135
 Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn
 140 145 150
 Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro
 155 160 165
 Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser
 170 175 180
 Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro
 185 190 195
 Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu
 200 205 210
 Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly
 215 220 225
 Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly
 230 235 240
 Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile
 245 250

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

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<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
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 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp
 260 265 270
 Ile Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser
 275 280 285
 Asp Pro Pro Ala Leu Pro Asp Ser Thr Glu Ala Lys Pro His Ile
 290 295 300
 Thr Glu Val Thr Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr
 305 310 315
 Thr Glu Ser Ala Ala Pro His Ala Thr Val Gly Thr Pro Leu Pro
 320 325 330
 Thr Asn Ser Ala Thr Glu Arg Glu Val Thr Ala Pro Gly Ala Thr
 335 340 345
 Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu
 350 355 360
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val
 365 370 375
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly
 380 385 390
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro
 395 400 405
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr
 410 415 420
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro
 425 430 435
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr
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 Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

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<210> 515
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 515
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 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
 35 40 45
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
 50 55 60
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
 65 70 75
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
 80 85 90
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
 95 100 105
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
 110 115 120
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
 125 130 135
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
 140 145 150
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
 155 160 165
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
 170 175 180
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
 185 190 195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
 200 205 210
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
 215 220 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
 230 235 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
 245 250 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
 260 265 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
 275 280 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
 290 295 300
 Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly
 305 310 315
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
 320 325 330
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn
 335 340 345
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
 350 355 360
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
 365 370 375
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
 380 385 390
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
 395 400 405
 Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu
 410 415 420
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile
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<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

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Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
				20					25					30
Asp	Thr	Val	Ser		Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg
				35					40					45
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg
				50				55						60
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met
				65				70						75

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	200	210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	215	225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	230	240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	245	255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	260	270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	275	285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Lys	Thr	Ala	Glu	Glu	Lys	290	300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	305	315
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Ser Ala																

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

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<210> 519

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<223> Synthetic oligonucleotide probe

<400> 524
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<210> 525
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<223> Synthetic oligonucleotide probe

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<223> Synthetic oligonucleotide probe

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<210> 527
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<223> Synthetic oligonucleotide probe

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gatgaacttg gcgaaggggc ggca 24

<210> 528
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 528
agggaggatt atccttgacc tttgaagacc 30

<210> 529
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 529
gaagcaagtg cccagctc 18

<210> 530
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<400> 530
cggtccctg ctcttttg 18

<210> 531
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caccgtagct gggagcgcac tcac 24

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agtgtaatgc aagctccc 18